	SUGGESTED CONSTRUCTION SEQUENCING	(note to designer: edit as needed to meet project requirements)
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- 1. Install appropriate temporary erosion control devices to prevent sediment from leaving or entering the practice during construction.
- 2. All down-gradient perimeter sediment control bmp's must be in place before any up gradient land disturbing activity begins.
- 3. Perform continuous inspections of erosion control practices, especially after each rainfall event.
- 4. Install all utilities (water, sanitary sewer, electric, natural gas, phone, fiber optic, etc) prior to setting final grade of bioretention device.
- 5. Rough grade the site. If bioretention areas are being used as temporary sediment basins during construction, leave a minimum of 1 feet of cover over the practice to protect the underlying soils from clogging.

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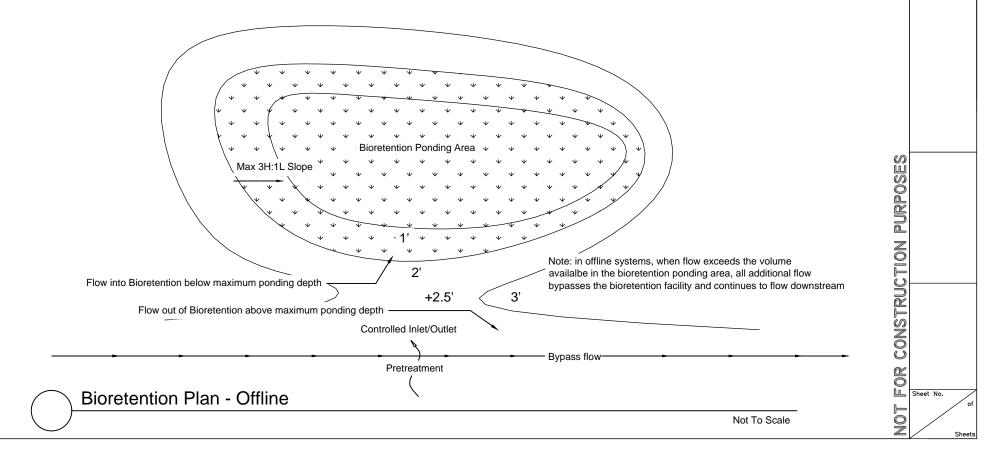
- 6. Complete, stabilize, and vegetate all other site improvements.
- 7. Construct and vegetate bioretention device following stabilization of contributing drainage area. Ensure that critical elevations, such as underdrain invert, top of media, top of mulch, and invert of overflow structure (if present) are correct.
- 8. Remove temporary erosion control devices after the contributing drainage area is adequately vegetated.

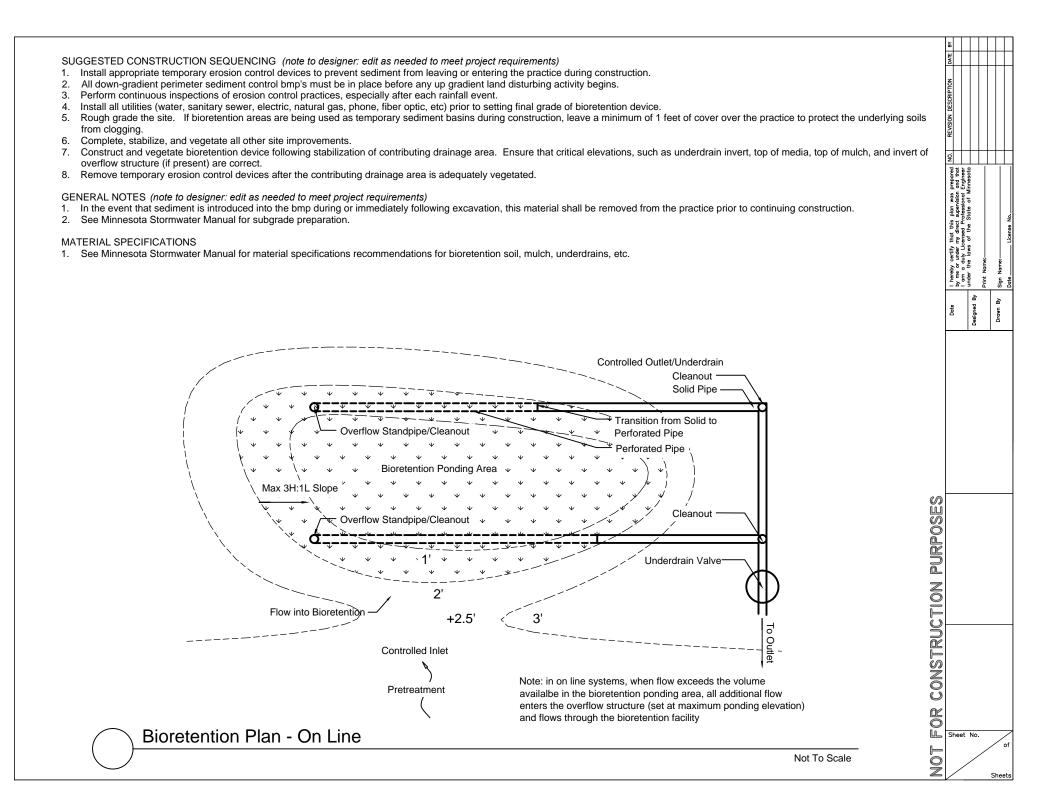
GENERAL NOTES (note to designer: edit as needed to meet project requirements)

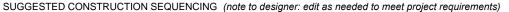
- 1. In the event that sediment is introduced into the bmp during or immediately following excavation, this material shall be removed from the practice prior to continuing construction.
- 2. See Minnesota Stormwater Manual for subgrade preparation.

MATERIAL SPECIFICATIONS

1. See Minnesota Stormwater Manual for material specifications recommendations for bioretention soil, mulch, underdrains, etc.







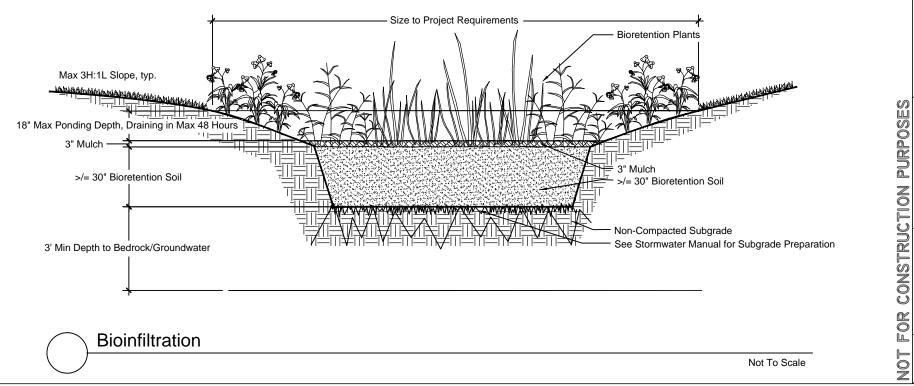
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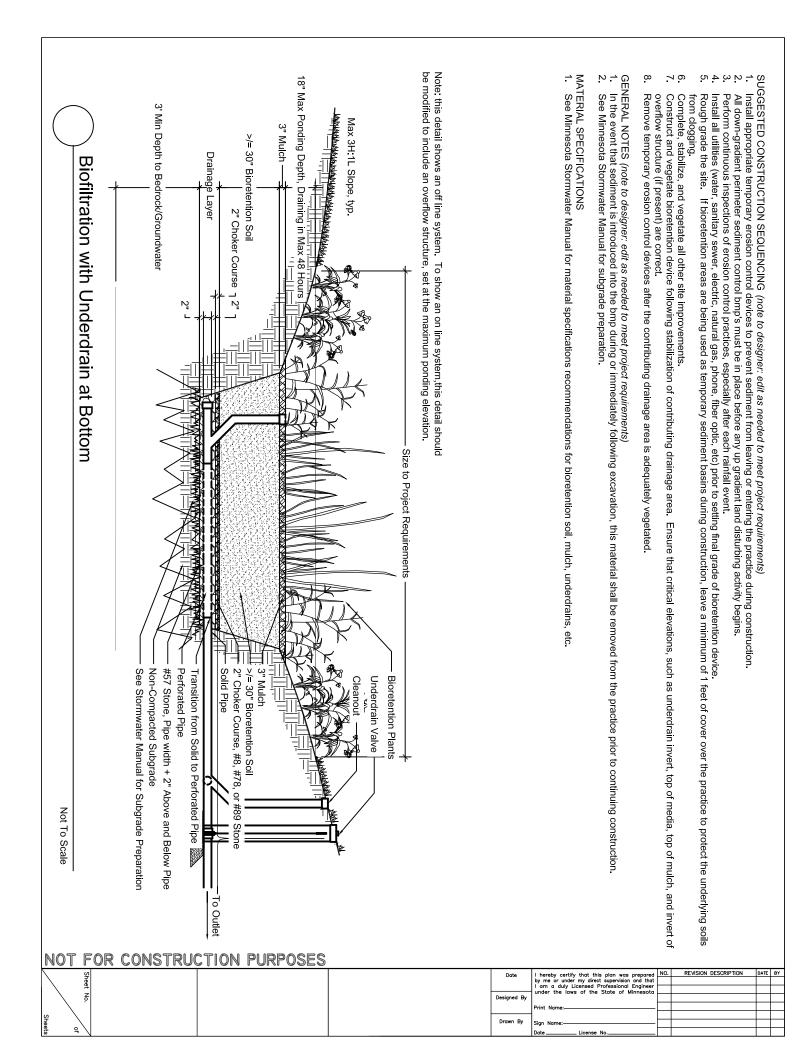
MATERIAL SPECIFICATIONS

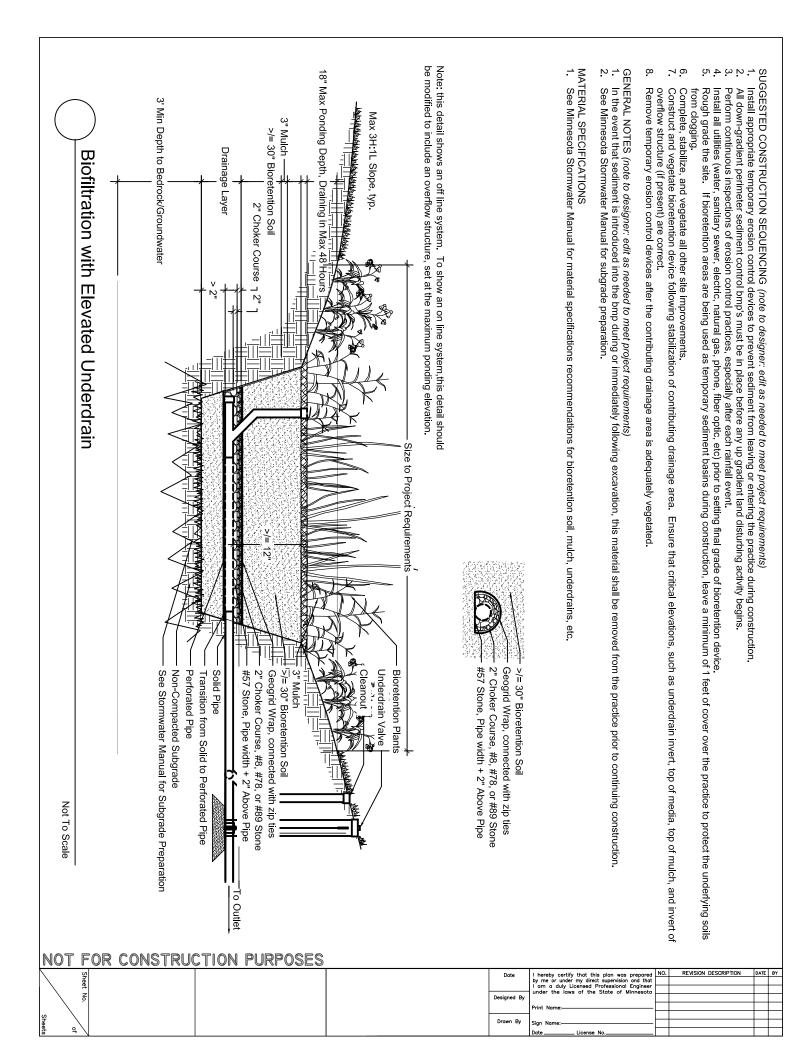
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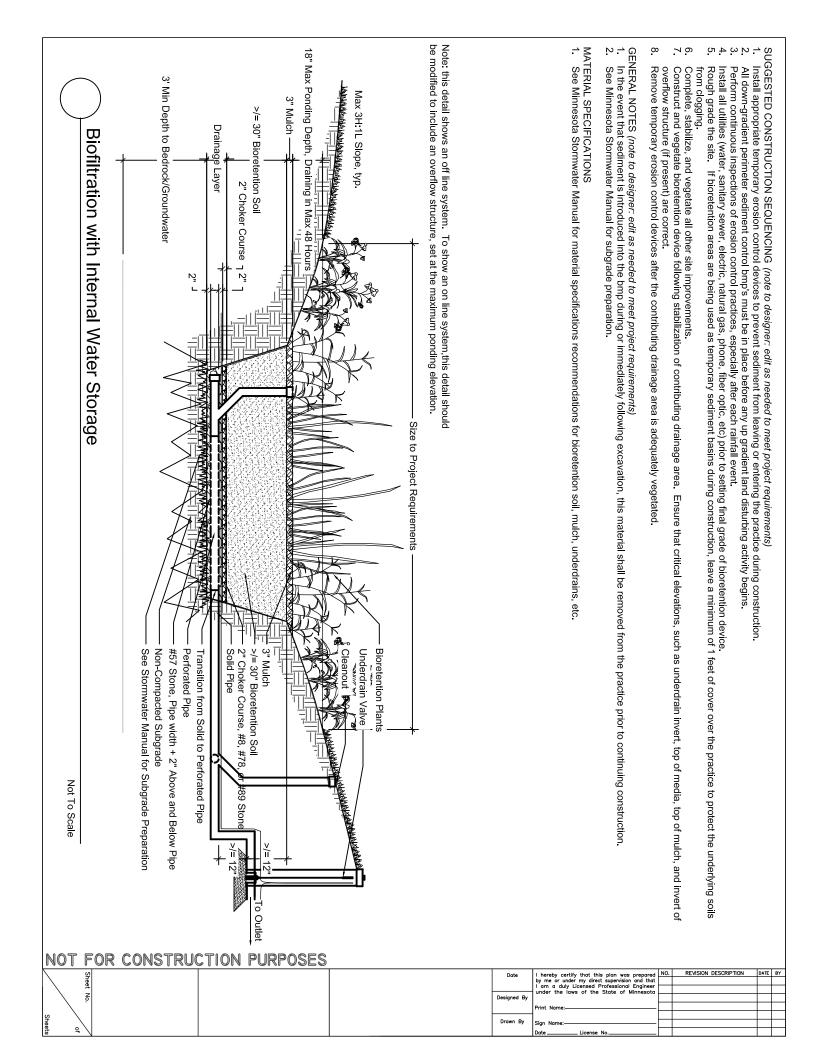


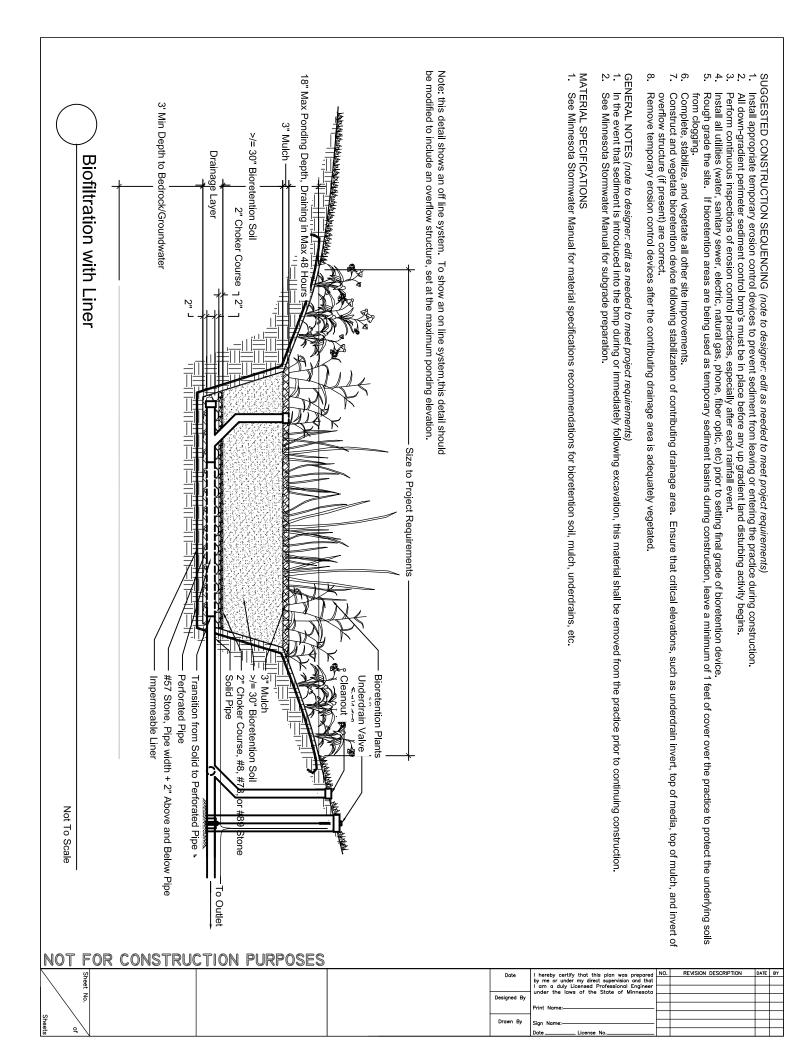
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SUGGESTED CONSTRUCTION SEQUENCING (note to designer: edit as needed to meet project requirements)

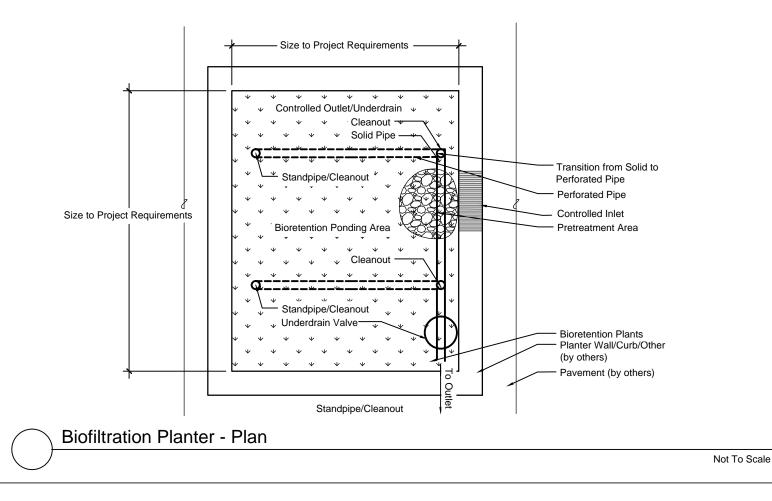
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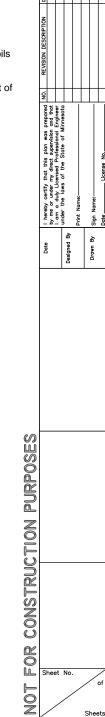
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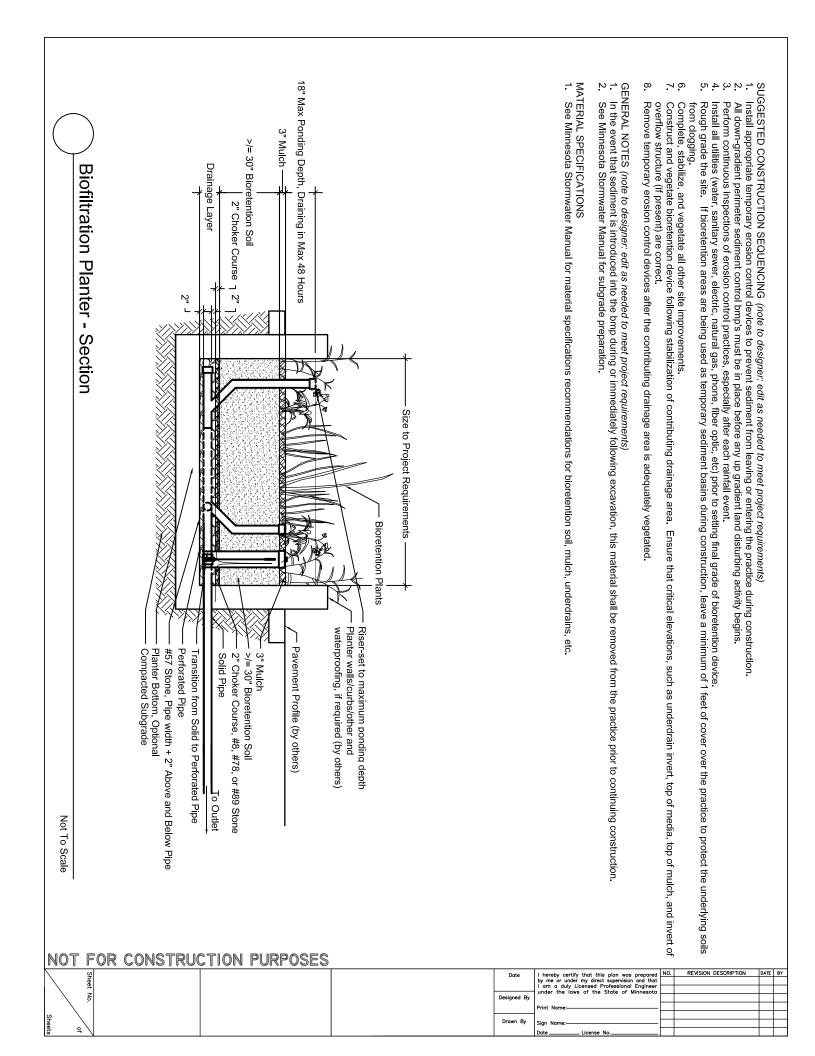
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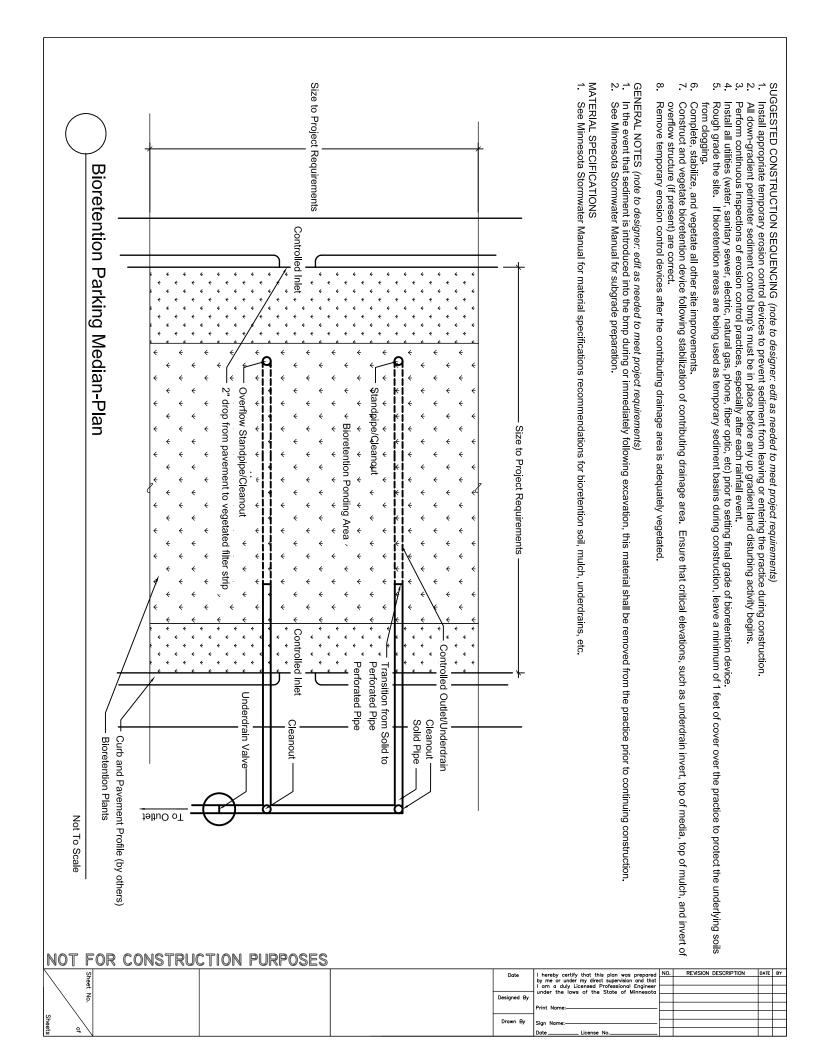
MATERIAL SPECIFICATIONS

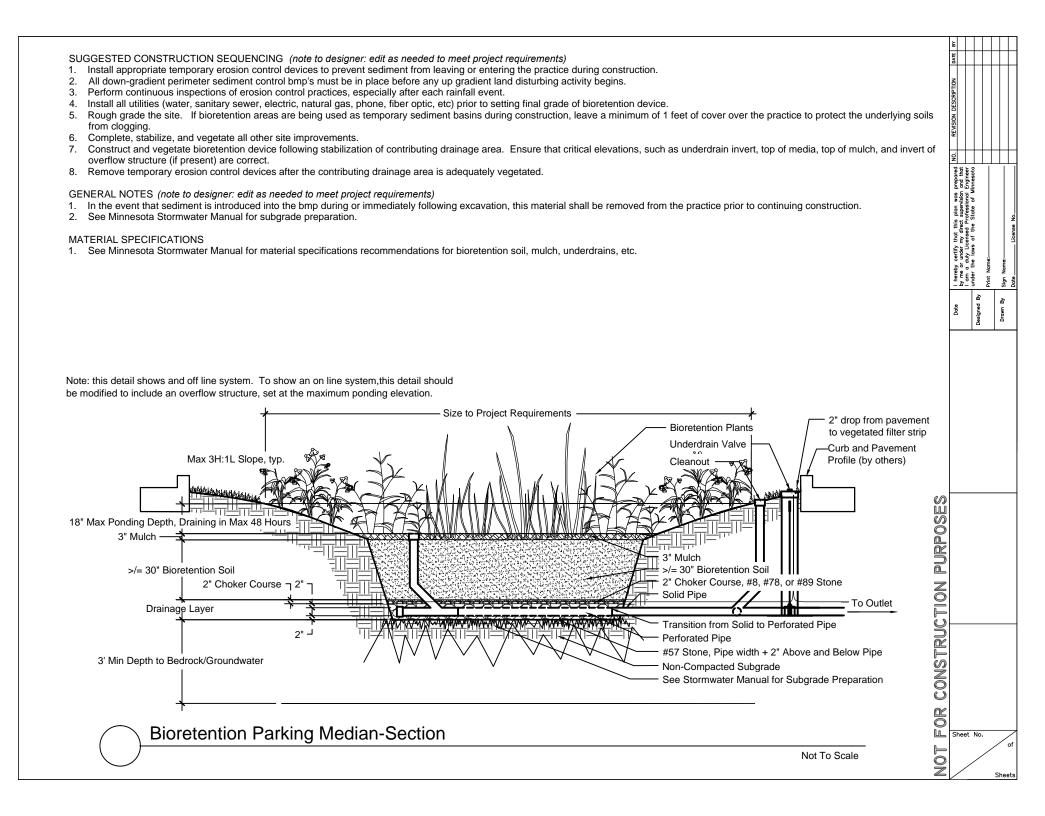
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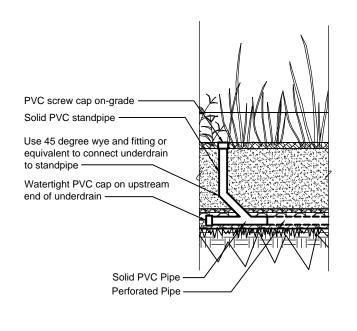






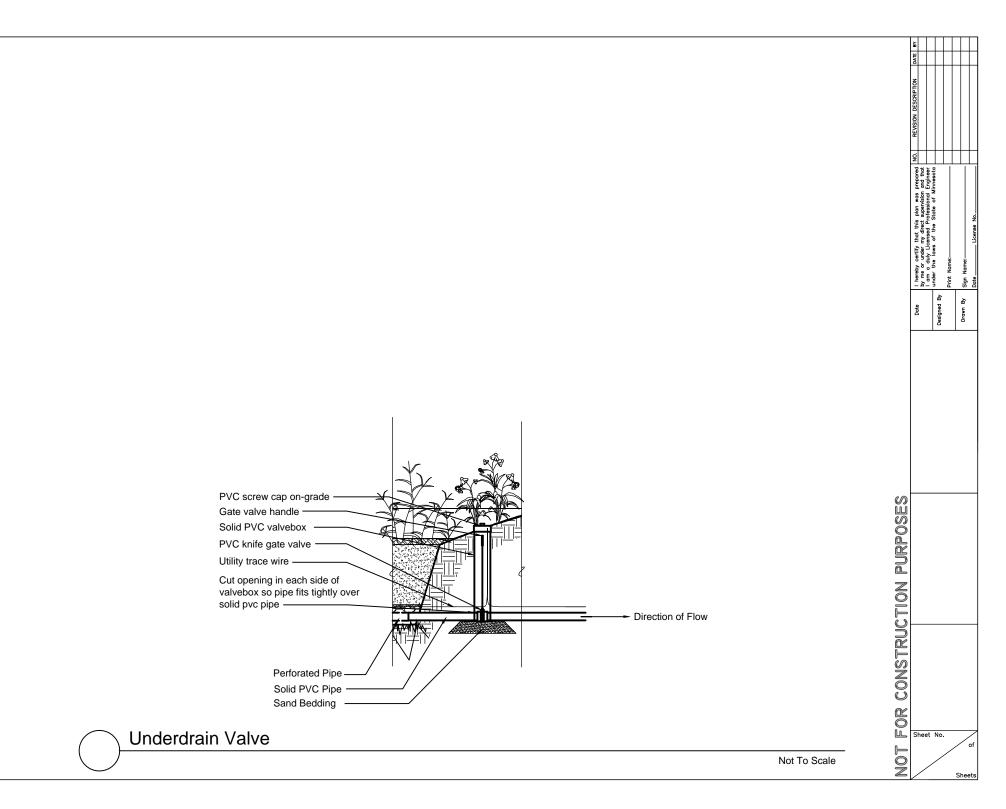


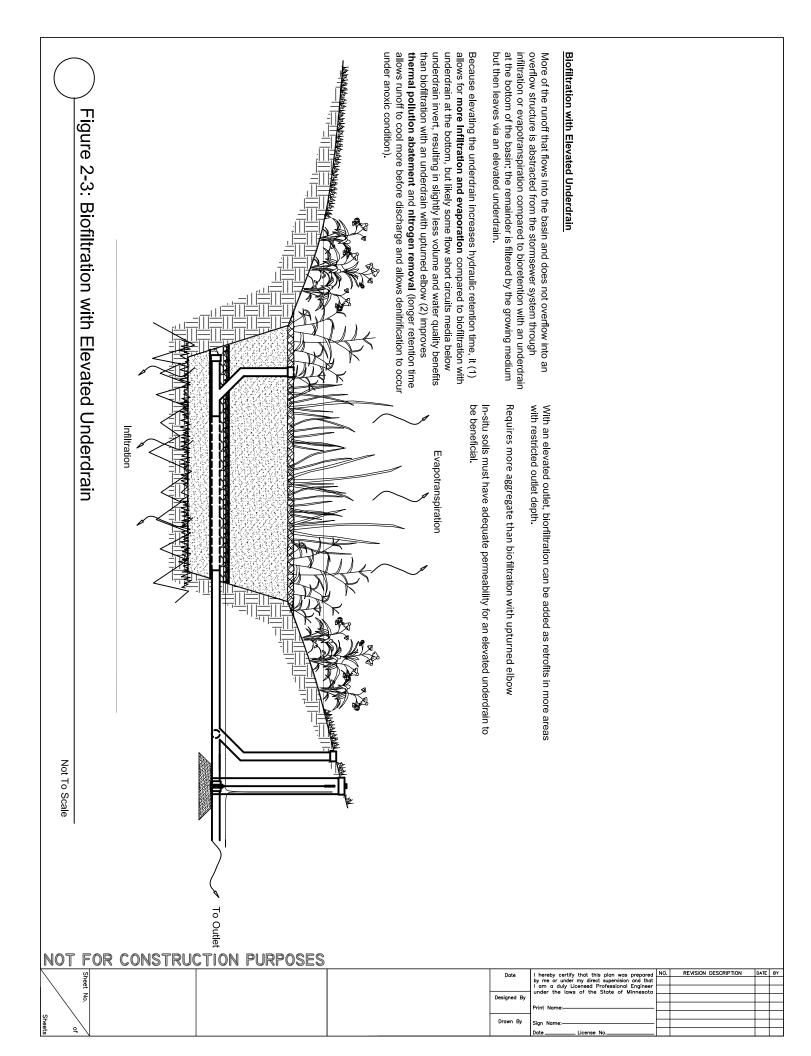


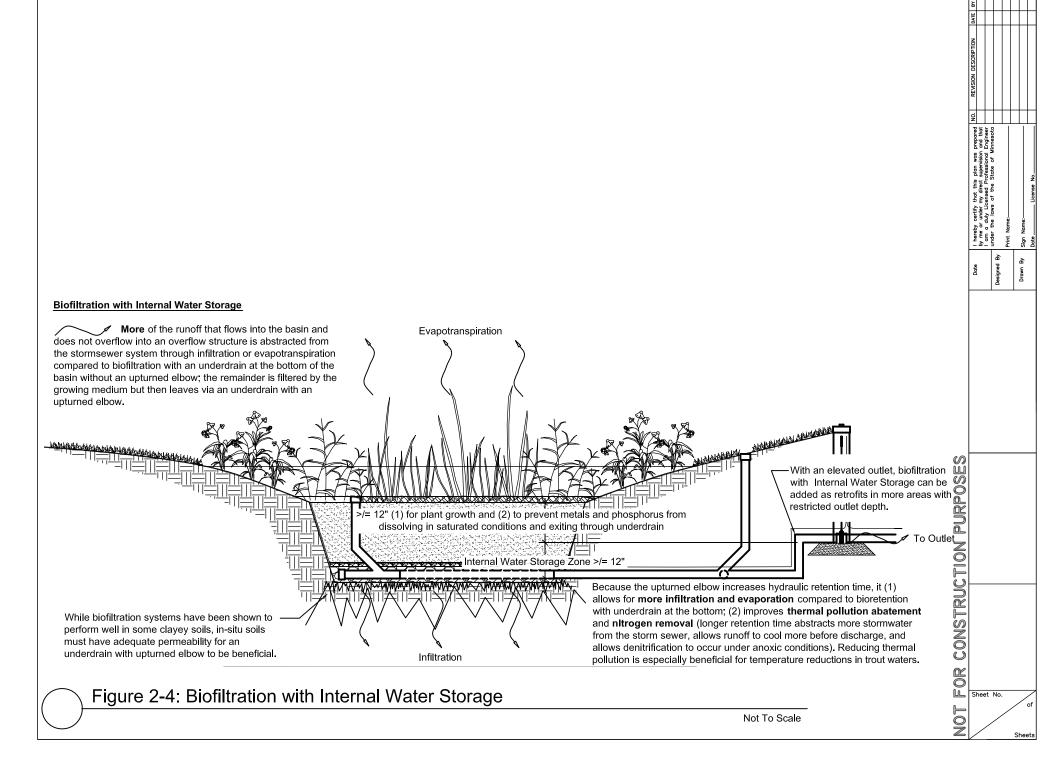


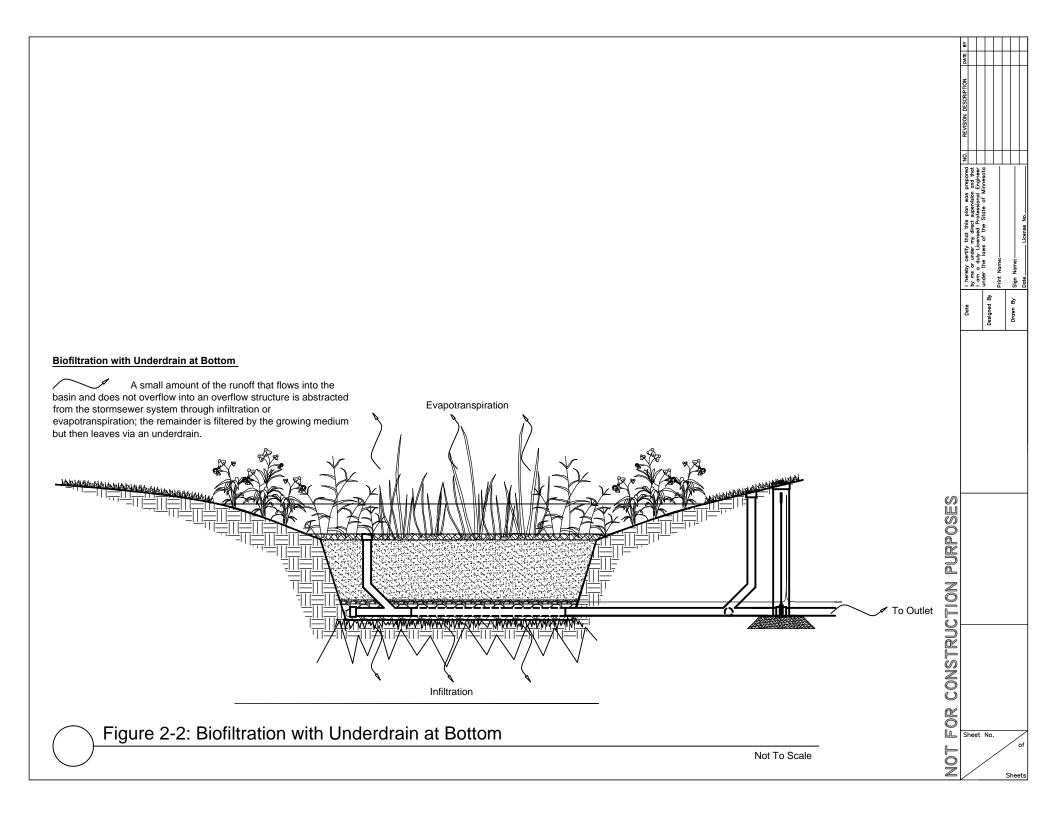
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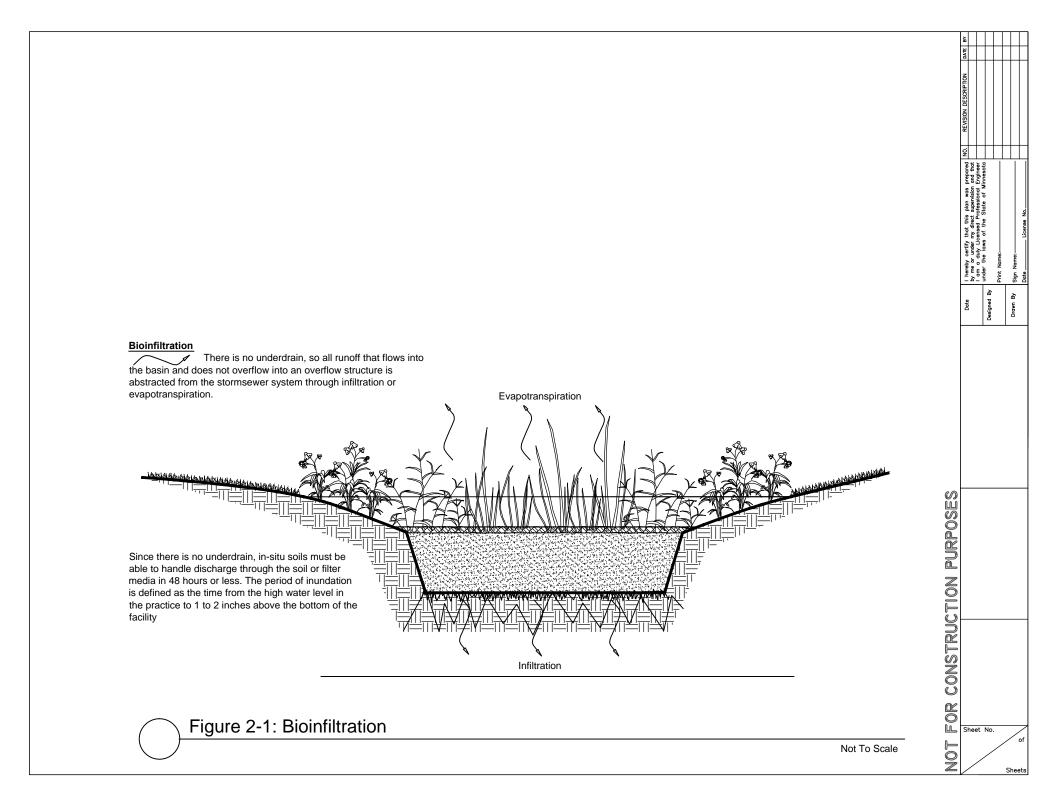
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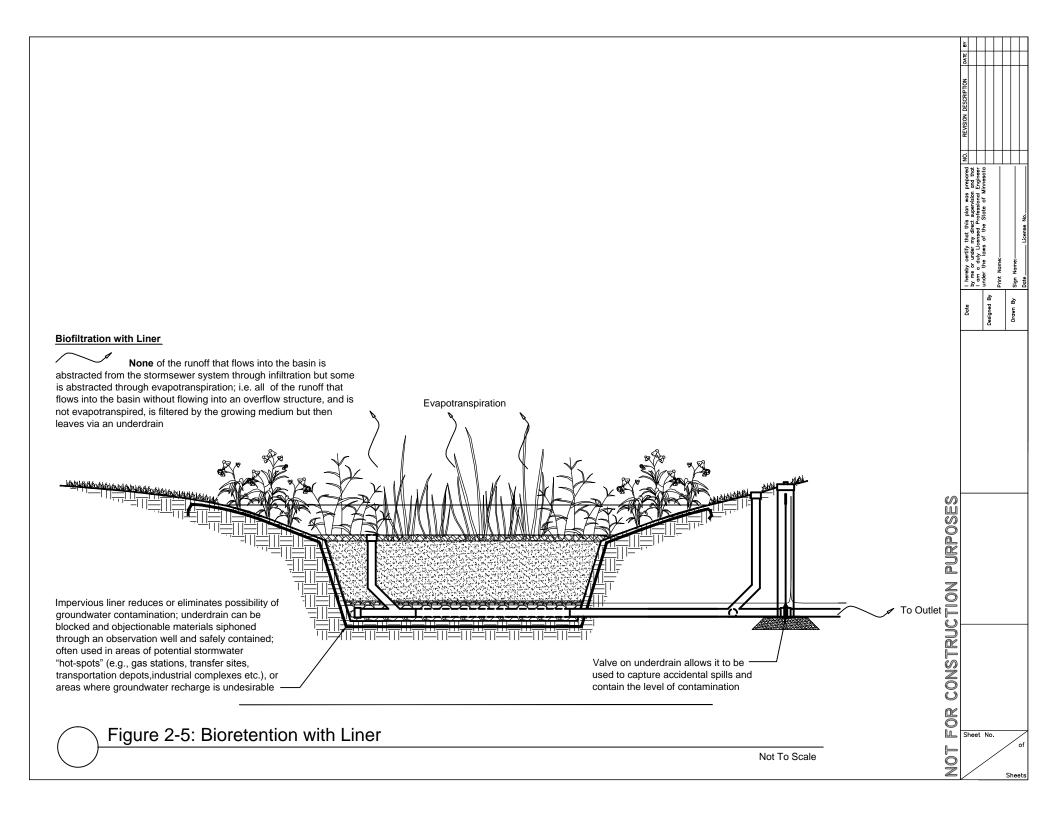


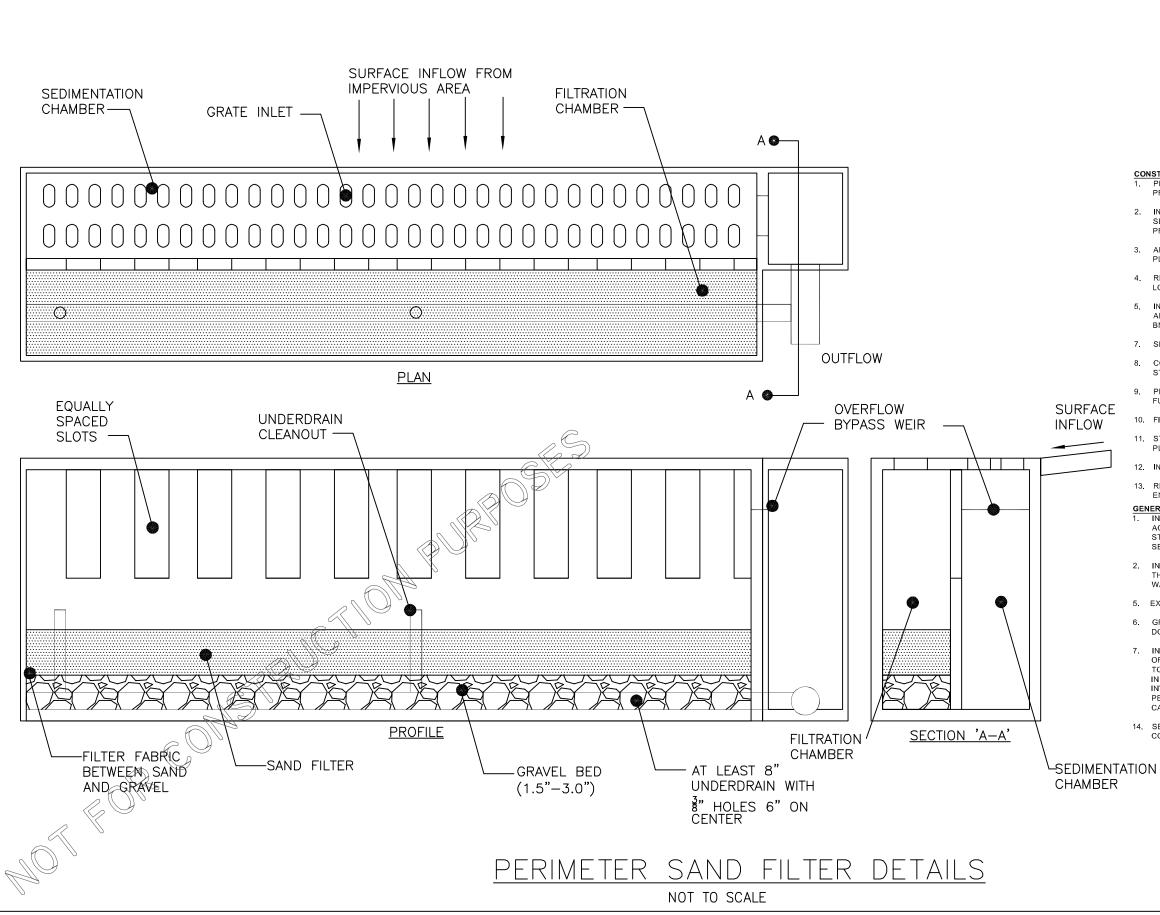












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CONSTRUCTION SEQUENCING:

PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.

INSTALL SILT FENCE ALONG THE PERIMETER OF THE SITE TO PREVENT SEDIMENT FROM LEAVING THE SITE DURING THE CONSTRUCTION PROCESS

3. ALL DOWNGRADIENT PERIMETER SEDIMENT-CONTROL BMPS MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND-DISTURBING ACTIVITY BEGINS.

4. REMOVE TOPSOIL FROM THE SITE AND PLACE IN TEMPORARY STOCKPILE LOCATION. TEMPORARY SEED THE STOCKPILE

INSTALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, ELECTRIC AND PHONES) TAKING THE LOCATION AND FUNCTION OF STORM WATER BMPS INTO CONSIDERATION.

7. SEED AND MULCH DISTURBED AREAS ON SITE.

CONSTRUCT THE ROADS TAKING THE LOCATION AND FUNCTION OF STORM WATER BMPS INTO CONSIDERATION.

PERFORM ALL OTHER SITE IMPROVEMENTS TAKING THE LOCATION AND FUNCTION OF THE STORM WATER BMPS INTO CONSIDERATION.

10. FINAL GRADE THE SITE.

11. STABILIZE THE SITE BY IMPLEMENTING THE NATIVE SEEDING AND PLANTING PORTION OF THE LANDSCAPING PLAN.

12. INSTALL THE EROSION CONTROL BLANKET

13. REMOVE THE SILT FENCE AFTER THE SITE IS STABILIZED PER PROJECT ENGINEER APPROVAL.

GENERAL NOTES:

INSTALL ALL TEMPORARY EROSION CONTROL MEASURES (IN ACCORDANCE WITH MnDOT GENERAL CONDITIONS 2573) PRIOR TO THE START OF ANY CONSTRUCTION OPERATION THAT MAY CAUSE ANY SEDIMENTATION OR SILTATION AT THE SITE.

2. INSTALL STORM DRAIN INLET PROTECTION TO PREVENT CLOGGING OF THE STORM SEWER AND SEDIMENT LOADS TO DOWNSTREAM STORM WATER FACILITIES OR WATERBODIES.

5. EXCAVATE THE FILTER TO THE SPECIFIED DEPTH (ELEVATION).

GRADE TO THE DEPTH (ELEVATION) SPECIFIED IN THE CONSTRUCTION DOCUMENTS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL WILL NEED TO BE REMOVED FROM THE BASIN PRIOR TO INITIATING THE NEXT STEP IN THE CONSTRUCTION PROCESS. SEDIMENT THAT HAS BEEN WASHED INTO THE BASIN DURING THE EXCAVATION PROCESS CAN SEAL THE PERMEABLE MATERIAL, SIGNIFICANTLY REDUCING THE INFILTRATION CAPACITY OF THE SOILS.

14. SEEDING AND INSTALLATION OF EROSION CONTROL BLANKET SHALL BE COMPLETED WITHIN 48 HOURS OF FINAL GRADING.

SURFACE SAND FILTER COST ESTIMATE WORKSHEET 2005 Prices



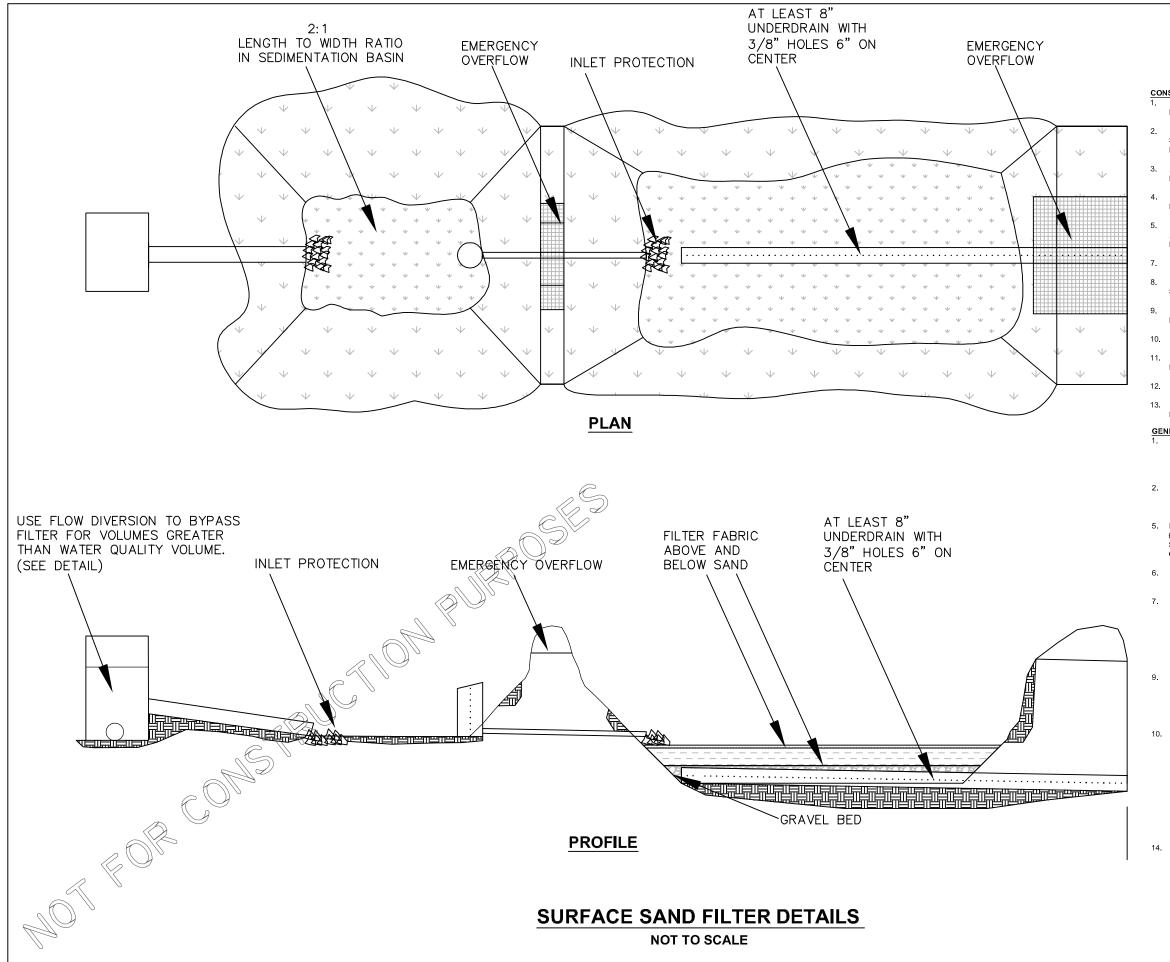
Description	Units	Quantity Unit Cost	Total Estimated Price
Site Preparation			
Tree removal - up to 12" diameter	each	\$350.00	\$0.00
Clear and grub brush	square yard	\$1.50	\$0.00
Tree protection - temp. fence	lineal foot	\$3.00	\$0.00
Topsoil - 6" depth, salvage on site	square yard	\$4.50	\$0.00
Site Formation			
Excavation - 6' depth	square yard	\$8.00	\$0.00
Grading	square yard	\$1.50	\$0.00
Hauling off-site - 6' depth	square yard	\$10.00	\$0.00
Structural Components			
Underdrain - with pea gravel and geotextile	square yard	\$400.00	\$0.00
Inlet structure	each	\$1,500.00	\$0.00
Sand filter media - 18" depth	square yard	\$15.00	\$0.00
Outlet structure	each	\$3,000.00	\$0.00
Site Restoration			
Sod filter strip	lineal foot	\$1.50	\$0.00
Soil preparation	square yard	\$5.00	\$0.00
Seeding	square yard	\$0.50	\$0.00
		Subtotal	\$0.00
		10% Contingencies	\$0.00
		Subtotal	\$0.00
		Apply MN Location Factor	
		TOTAL CONSTRUCTION COST	\$0.00

Annual Operation and Maintenan	ce		
Debris removal	per visit	\$50.00	\$0.00
Mowing	per visit	\$150.00	\$0.00
Sediment removal	per year	\$500.00	\$0.00
Gate / valve operation	per visiit	\$125.00	\$0.00
Erosion repair	square yard	\$75.00	\$0.00
Inspection	per visit	\$125.00	\$0.00
		Subtotal	\$0.00
		Apply MNL ocation Factor	

Apply MN Location Factor	
TOTAL ANNUAL O&M COST	\$0.00

Minnesota Location Factors		
Bemidji	0.963	
Brainerd	1.003	
Detroit Lakes	0.962	
Duluth	0.991	
Mankato	0.990	
Minneapolis	1.035	
Rochester	0.983	
St. Paul	1.000	
St. Cloud	1.002	
Thief River Falls	1.042	
Willmar	0.961	
Windom	0.935	

Note: Suggested unit costs are based on RSMeans prices for Spring, 2005, then factored into an area basis based on typical design features for Media Filtration BMPs. To be used for preliminary cost estimation.



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CONSTRUCTION SEQUENCING: 1. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES

INSTALL SILT FENCE ALONG THE PERIMETER OF THE SITE TO PREVENT SEDIMENT FROM LEAVING THE SITE DURING THE CONSTRUCTION PROCESS.

ALL DOWNGRADIENT PERIMETER SEDIMENT-CONTROL BMPS MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND-DISTURBING ACTIVITY BEGINS.

REMOVE TOPSOIL FROM THE SITE AND PLACE IN TEMPORARY STOCKPILE LOCATION. TEMPORARY SEED THE STOCKPILE.

INSTALL UNDERGROUND UTILITIES (WATER, SANITARY SEWER, ELECTRIC AND PHONES) TAKING THE LOCATION AND FUNCTION OF STORM WATER BMPS INTO CONSIDERATION

7. SEED AND MULCH DISTURBED AREAS ON SITE.

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10 FINAL GRADE THE SITE

11. STABILIZE THE SITE BY IMPLEMENTING THE NATIVE SEEDING AND PLANTING PORTION OF THE LANDSCAPING PLAN.

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2. INSTALL STORM DRAIN INLET PROTECTION TO PREVENT CLOGGING OF THE STORM SEWER AND SEDIMENT LOADS TO DOWNSTREAM STORM WATER FACILITIES OR WATERBODIES.

5. EXCAVATE THE INFILTRATION BASIN TO THE SPECIFIED DEPTH (ELEVATION). IT IS RECOMMENDED THAT ALL SUB MATERIAL BELOW THE SPECIFIED ÉLEVATION SHALL BE LEFT UNDISTURBED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

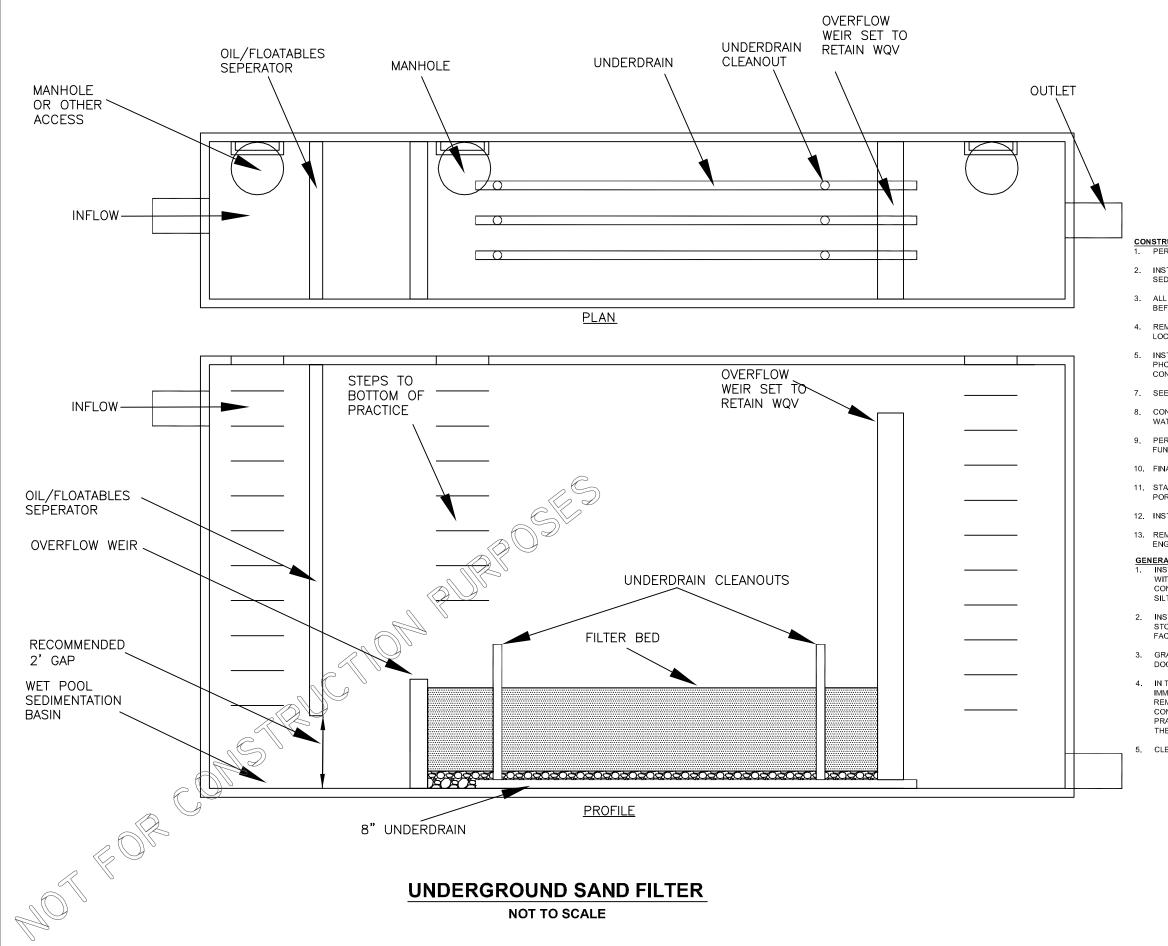
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NON-STANDARD COMPONENT: CLEAN, WASHED 1.5 TO 3.5-INCH GRAVEL SHALL BE PLACED IN THE BOTTOM OF THE BASIN TO THE DEPTH OF AT LEAST 12 INCHES OR AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS. GRAVEL SHOULD BE PLACED IN LIFTS AND LIGHTLY COMPACTED WITH PLATE COMPACTORS.

10. NON-STANDARD COMPONENT: THE PERFORATED PIPE (UNDERDRAIN) SHALL BE LAID DIRECTLY ON THE GRAVEL BED. GRADE AND ALIGNMENT SHALL NOT VARY FROM THE PRESCRIBED GRADE BY MORE THAN 0.03 FEET (9 MM) AT ANY POINT. THE JOINTS BETWEEN SECTIONS OF PIPE SHALL BE CONNECTED IN A FASHION ACCEPTABLE TO ENGINEER. ONCE THE PIPE IS IN PLACE, IT SHALL BE COVERED IMMEDIATELY WITH GRANULAR MATERIAL AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS. THE GRANULAR MATERIAL SHALL BE OF UNFORM DEPTH ON BOTH SIDES OF THE PIPE. SPECIAL INLETS AND SPECIAL DEVICES AT THE OUTLET END OF THE PIPE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS

14. SEEDING AND INSTALLATION OF EROSION CONTROL BLANKET SHALL BE COMPLETED WITHIN 48 HOURS OF FINAL GRADING.



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CONSTRUCTION SEQUENCING:

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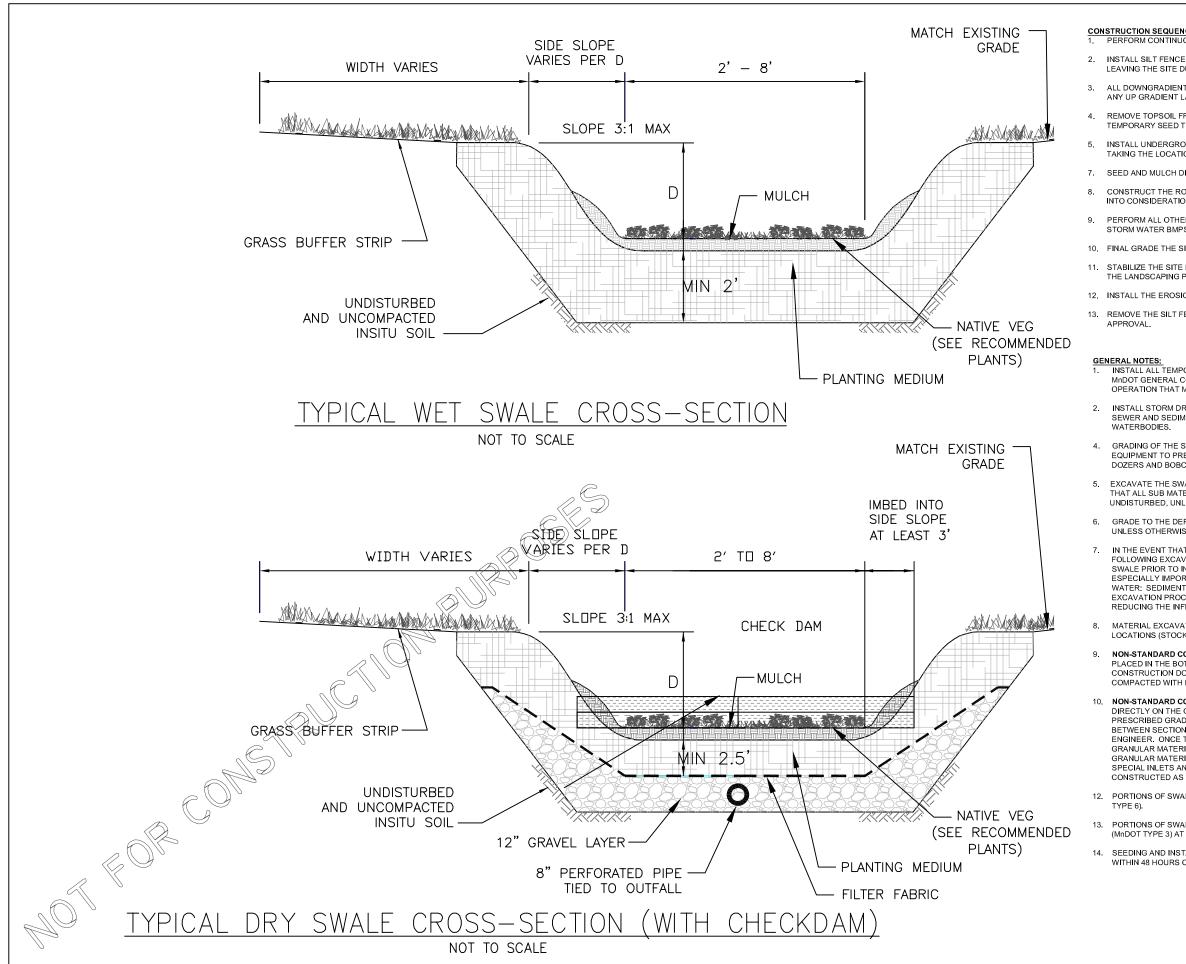
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3. GRADE TO THE DEPTH (ELEVATION) SPECIFIED IN THE CONSTRUCTION DOCUMENTS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING CONSTRUCTION, THIS MATERIAL WILL NEED TO BE REMOVED FROM THE PRACTICE PRIOR TO INITIATING THE NEXT STEP IN THE CONSTRUCTION PROCESS. SEDIMENT THAT HAS BEEN WASHED INTO THE PRACTICE CAN SEAL THE PERMEABLE MATERIAL, SIGNIFICANTLY REDUCING THE FILTRATION CAPACITY OF THE SOILS.

5. CLEAN OUT SETTLING BASIN WHEN 1' OF SEDIMENT HAS ACCUMULATED.



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RAIN INLET PROTECTION TO PREVENT CLOGGING OF THE STORM MENT LOADS TO DOWNSTREAM STORM WATER FACILITIES OR	Control Age	5-4194 5300	TTY: (651)-282-5332 WEBSITE:www.pca.state.mn.us/	
SWALE SHALL BE ACCOMPLISHED USING LOW-IMPACT EARTH-MOVING REVENT COMPACTION OF THE UNDERLYING SOILS. SMALL TRACKED CATS WITH RUNNER TRACKS ARE RECOMMENDED.	Minnesota Palludian Provi deman	эсо цагауеце поац St. Paul, MN 55155-4194 Phone: (651)-296-6300	TTY: (651)-282-5332 WEBSITE:www.pca.s	
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ATED FROM THE SWALE(S) SHALL BE DISPOSED OF ON-SITE AT :KPILE AREAS) DESIGNATED BY ENGINEER.		R A		
COMPONENT: CLEAN, WASHED 1.5 TO 3.5-INCH GRAVEL SHALL BE DTTOM OF THE SWALE TO THE DEPTH SPECIFIED IN THE OCUMENTS, GRAVEL SHOULD BE PLACED IN LIFTS AND LIGHTLY I PLATE COMPACTORS.		MINNES	ANUAL	
COMPONENT: THE PERFORATED PIPE (UNDERDRAIN) SHALL BE LAID GRAVEL BED. GRADE AND ALIGNMENT SHALL NOT VARY FROM THE DE BY MORE THAN 0.03 FEET (9 MM) AT ANY POINT. THE JOINTS NS OF PIPE SHALL BE CONNECTED IN A FASHION ACCEPTABLE TO THE PIPE IS IN PLACE, IT SHALL BE COVERED IMMEDIATELY WITH RIAL AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS. THE RIAL SHALL BE OF UNIFORM DEPTH ON BOTH SIDES OF THE PIPE. IND SPECIAL DEVICES AT THE OUTLET END OF THE PIPE SHALL BE S SHOWN IN THE PLANS.		2005 ST0I	ž	
ALE TO BE PLANTED SHALL RECEIVE 3" OF WOODCHIP MULCH (MnDOT		DRY		
ALE TO BE SEEDED SHALL BE MULCHED WITH CLEAN GRAIN STRAW T A RATE OF 2 TONS PER ACRE.				
TALLATION OF EROSION CONTROL BLANKET SHALL BE COMPLETED OF FINAL GRADING.		WET , SW	5	
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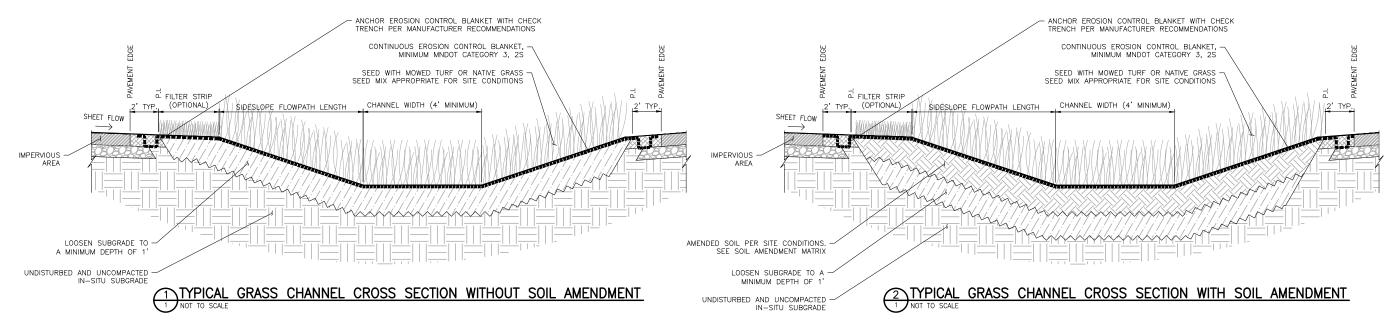


TABLE 1: MIDS GRASS CHANNEL SOIL AMENDMENT MATRIX

Veretation Ture	In-Situ Soil Type						
Vegetation Type	A	В	С	D			
	Diago Cil Juna anta d		Place 6" imported	Place 6" imported			
MOWED TURF SWALE OR NATIVE GRASS SWALE	Place 6" Imported topsoil**. Mix topsoil into subsoil by loosening subsoil to a minimum depth of 12"		filtration soil* on top of	filtration soil* on top of			
		Loosen subsoil to a	subgrade and mix into	subgrade and mix into			
		minimum depth of 12"	subsoil by loosening	subsoil by loosening			
			subsoil to a minimum	subsoil to a minimum			
	depth of 12		depth of 12"	depth of 12"			

* Filtration soil is defined as 80% clean sand mixed with 20% organic compost by volume

** Topsoil shall be sandy loam, loamy sand, or loam texture per USDA textural triangle with less than 5% clay content

GENERAL NOTES - GRASS CHANNELS AND DRY SWALES:

- INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SWPPP, PROJECT PLANS, AND SPECIFICATIONS IN ORDER TO EFFECTIVELY REDUCE THE VOLUME AND VELOCITY OF RUNOFF AND REDUCE EROSION OF SURFACE SOILS AND TO CONTROL SEDIMENT TRANSPORT OFF SITE DURING THE CONSTRUCTION PERIOD.
- 2. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING THE DURATION OF THE PROJECT.
- SEED MIX SHALL BE SELECTED BASED ON SITE CONDITIONS INCLUDING SOIL TYPE, MOISTURE CONDITIONS, FLOW CONDITIONS, SUN VS. SHADE CONDITIONS, AESTHETICS, AND MAINTENANCE REQUIREMENTS. MNDOT SPECIFICATION 3876 PROVIDES USEFUL CRITERIA FOR SELECTING APPROPRIATE SEED MIXTURES.
- EROSION CONTROL BLANKET SHALL BE SELECTED IN ACCORDANCE WITH MNDOT SPECIFICATION 3885 FOR THE SPECIFIC SITE CONDITIONS. THE MINIMUM RECOMMENDED 4. EROSION CONTROL BLANKET IS CATEGORY 3, 2S. MORE PERMANENT EROSION CONTROL BLANKET MAY BE REQUIRED BASED ON SWALE GRADIENT, FLOW VELOCITY, AND FLOW DEPTH
- 5. EROSION CONTROL BLANKETS INSTALLATION SHALL BE IN ACCORDANCE WITH MNDOT SPECIFICATION 3885 AND MANUFACTURERS RECOMMENDATIONS FOR ANCHORING, CHECK TRENCHES, AND EDGE AND END OVERLAPS.
- AVOID COMPACTION OF ALL IN-SITU SOILS AND IMPORTED SOILS UNLESS DIRECTED OTHERWISE. DO NOT LOOSEN SUBSOIL UNDER CHECK DAMS. 6.
- 7 IF POSSIBLE RESTRICT FLOW OR DIVERT FLOW FROM SWALE LINTIL VEGETATION IS ESTABLISHED

NOT FOR CONSTRUCTION PURPOSES

EXCAVATE CHANNEL TO SUBGRADE ELEVATIONS PER THE PLAN.	1.	EX
CONSTRUCTION SEQUENCE VARIES DEPENDING ON IN-SITU SOIL TYPE. SEE TABLE 1 FOR PROPER SEQUENCE FOR LOOSENING SUBSOILS AND ADDING	2.	CC S⊦

3. LOOSEN SOIL IN A MANNER THAT AVOIDS RECOMPACTION OF THE SOIL BY CONSTRUCTION TRAFFIC.

TYPICAL CONSTRUCTION SEQUENCING-GRASS CHANNEL:

1

2

SOIL AMENDMENTS

- 4. AFTER SOIL LOOSENING AND ADDITION OF SOIL AMENDMENTS THE SURFACE OF THE SWALE WILL BE ROUGH.
- IF POSSIBLE, STABILIZE ALL UPSTREAM TRIBUTARY AREAS BEFORE 5. COMPLETING FINISH GRADING OF SWALES. THIS WILL MINIMIZE THE DEPOSITION OF SEDIMENT IN THE FINISHED SWALE.
- 6. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL WILL NEED TO BE REMOVED FROM THE SWALE PRIOR TO INITIATING THE NEXT STEP IN THE CONSTRUCTION PROCESS. THIS IS ESPECIALLY IMPORTANT IF THE SWALE HAS BEEN DESIGNED TO INFILTRATE STORMWATER: SEDIMENT THAT HAS BEEN WASHED INTO THE SWALE DURING THE EXCAVATION PROCESS CAN SEAL THE PERMEABLE MATERIAL, SIGNIFICANTLY REDUCING THE INFILTRATION CAPACITY OF THE SOILS.
- 7. FINISH GRADE THE SWALE USING METHODS THAT AVOID RECOMPACTION OF LOOSENED SOIL ACCEPTABLE METHODS INCLUDE HAND RAKING SMOOTHING WITH A BACKHOE BUCKET FROM OUTSIDE THE LIMITS OF THE SWALE AND/OR PULLING A DRAG BEHIND LOW GROUND PRESSURE EQUIPMENT LIKE AN ATV.
- 8. SOW SEED AND PLACE EROSION CONTROL BLANKET AFTER FINISH GRADING AND BEFORE THE FIRST RAINFALL EVENT (WITHIN 24 HOURS IS PREFERRED). DEPOSITION OF SEDIMENT ON TOP OF THE EROSION CONTROL BLANKET MAY KILL SEED AND BECOME A SOURCE OF SEDIMENT WASHING OFF SITE. SEDIMENT ON TOP OF THE EROSION CONTROL BLANKET SHALL BE REMOVED TO A DEPTH LESS THAN ONE INCH.
- IF STEP 6 IS NOT COMPLETED BEFORE THE FIRST RAINFALL EVENT, REPAIR RESULTING EROSION AND REMOVE ALL ACCUMULATED SEDIMENT FROM THE SWALE BEFORE SOWING SEED AND PLACING EROSION CONTROL BLANKET. EROSION REPAIR AND SEDIMENT REMOVAL SHALL BE COMPLETED WITHOUT COMPACTING THE SOIL (SEE STEP 5).

TYPICAL CONSTRUCTION SEQUENCING-DRY SWALES (SEE SHEET 2):

XCAVATE CHANNEL TO SUBGRADE ELEVATIONS PER THE PLAN.

CONSTRUCT CHECK DAMS AT THE LOCATIONS AND TO THE ELVATIONS SHOWN ON THE PLANS.

3. CONSTRUCTION SEQUENCE VARIES DEPENDING ON IN-SITU SOIL TYPE. SEE TABLE 1 FOR PROPER SEQUENCE FOR LOOSENING SUBSOILS AND ADDING SOIL AMENDMENTS.

4 LOOSEN SOIL IN A MANNER THAT AVOIDS RECOMPACTION OF THE SOIL BY CONSTRUCTION TRAFFIC. DO NOT LOOSEN SOILS UNDER CHECK DAMS.

5. INSTALL UNDERDRAIN (IF SPECIFIED) AFTER LOOSENING SUBGRADE SOILS. CAREFULLY COVER UNDERDRAIN WITH SAND TO AVOID COMPACTION AND DAMAGE TO THE PIPE. MARK THE LOCATION OF UNDERDRAIN AS NECESSARY TO AVOID DAMAGING THE PIPE DURING SUBSEQUENT CONSTRUCTION ACTIVITIES.

6. STABILIZE ALL UPSTREAM TRIBUTARY AREAS BEFORE COMPLETING FINISH GRADING OF SWALES. THIS WILL MINIMIZE THE DEPOSITION OF SEDIMENT IN THE FINISHED SWALE.

7. FINISH GRADE THE SWALE USING METHODS THAT AVOID RECOMPACTION OF LOOSENED SOIL. ACCEPTABLE METHODS INCLUDE HAND RAKING, SMOOTHING WITH A BACKHOE BUCKET FROM OUTSIDE THE LIMITS OF THE SWALE, AND/OR PULLING A DRAG BEHIND LOW GROUND PRESSURE EQUIPMENT LIKE AN ATV.

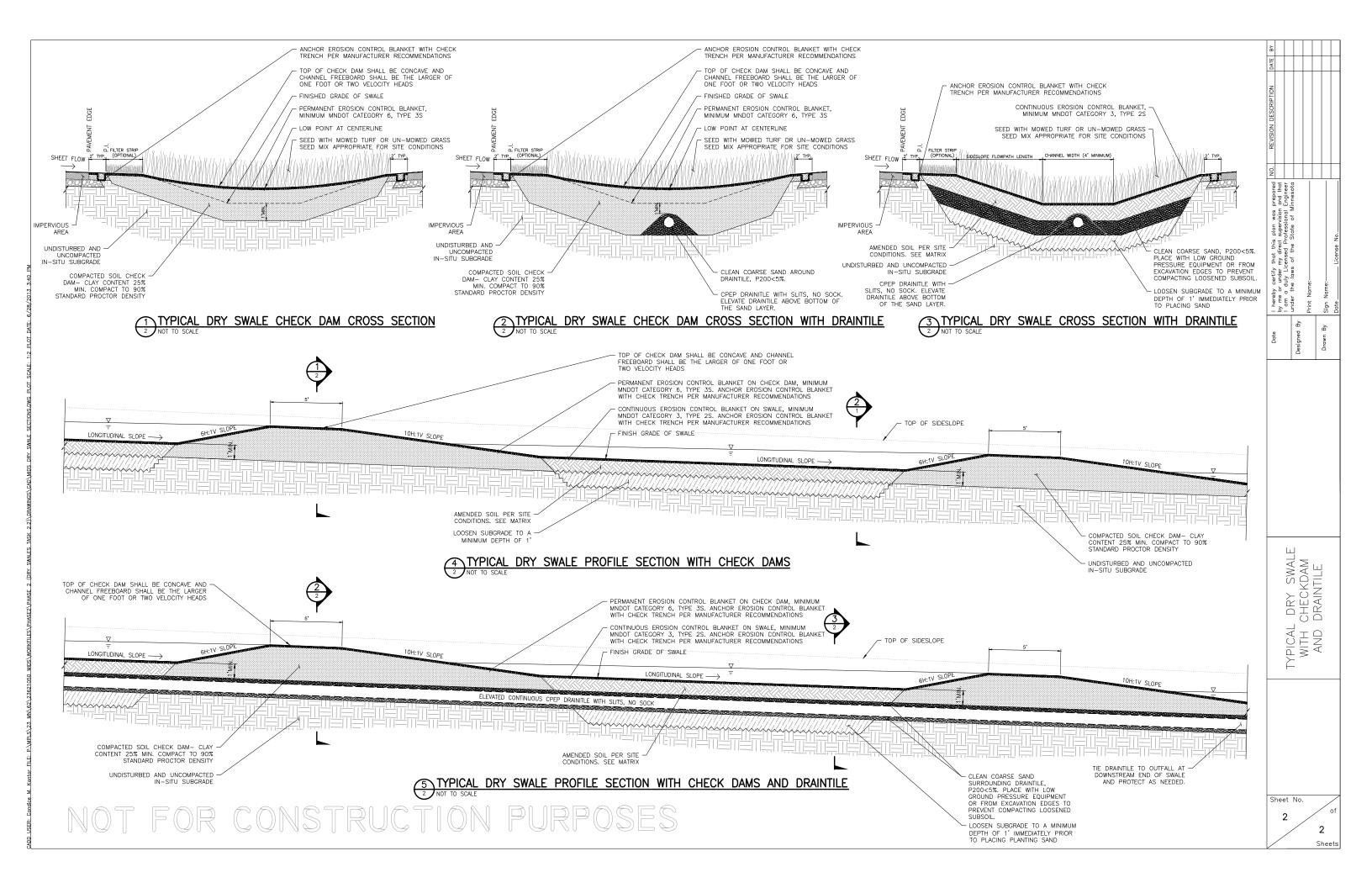
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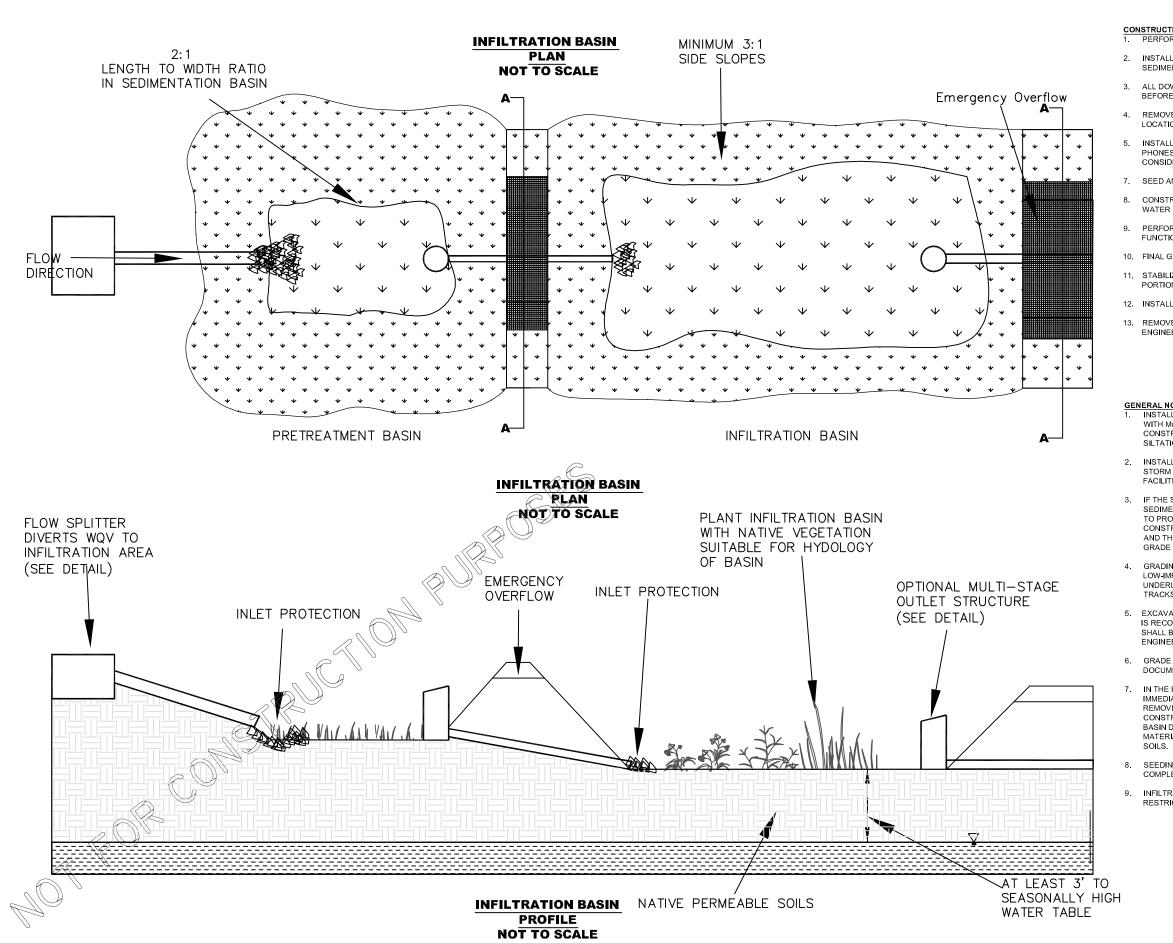
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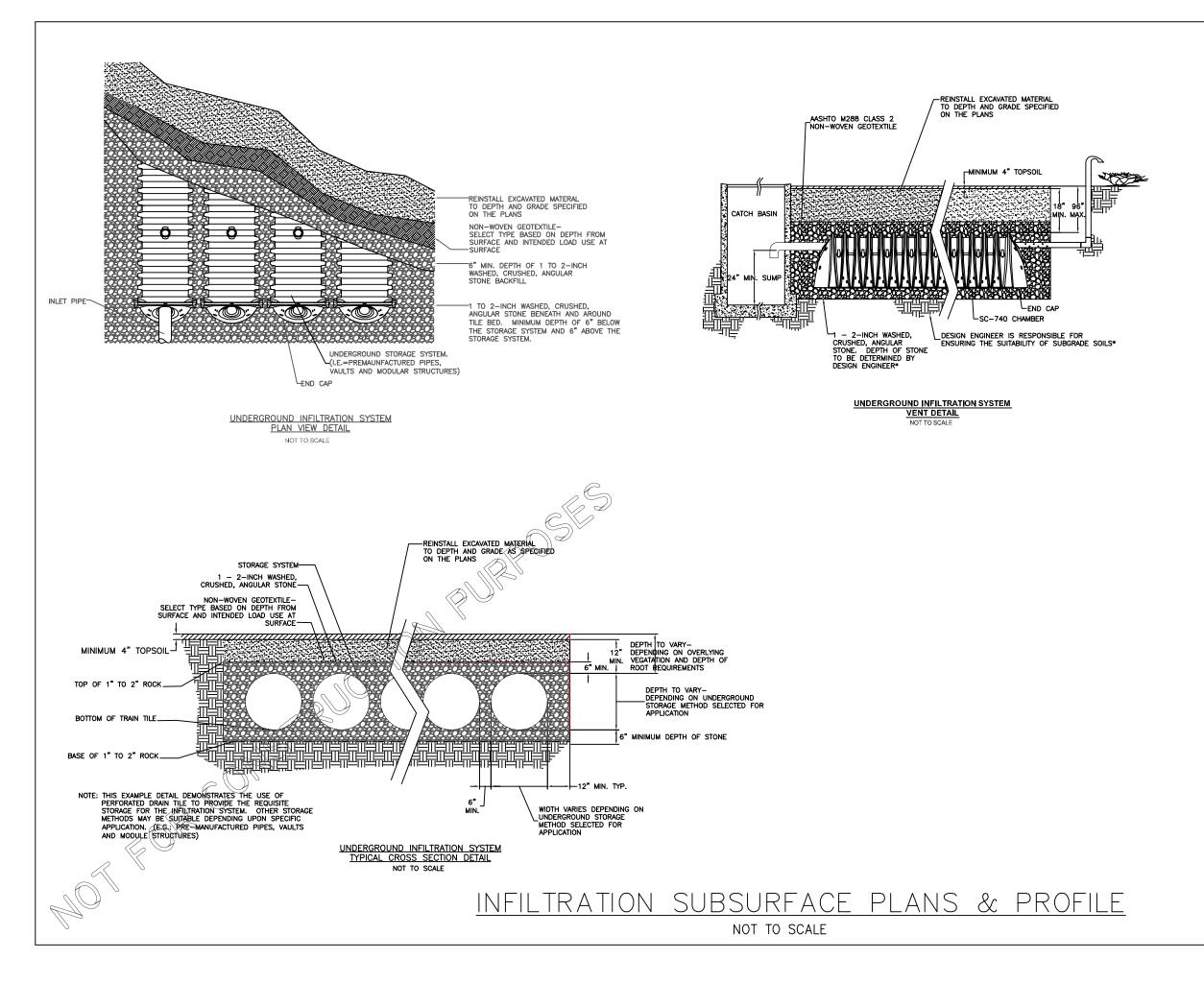
IF STEP 6 IS NOT COMPLETED BEFORE THE FIRST RAINFALL EVENT. REPAIR RESULTING EROSION AND REMOVE ALL ACCUMULATED SEDIMENT FROM THE SWALE BEFORE SOWING SEED AND PLACING EROSION CONTROL BLANKET. EROSION REPAIR AND SEDIMENT REMOVAL SHALL BE COMPLETED WITHOUT COMPACTING THE SOIL (SEE STEP 5).

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I hereby certify that this plan was prepared NO. REVISIO by me or under my disct supervision and that I am or duty licenced Protescional Fanimer	er the laws of the State of Minnesota	Print Name:	Name:	· License No
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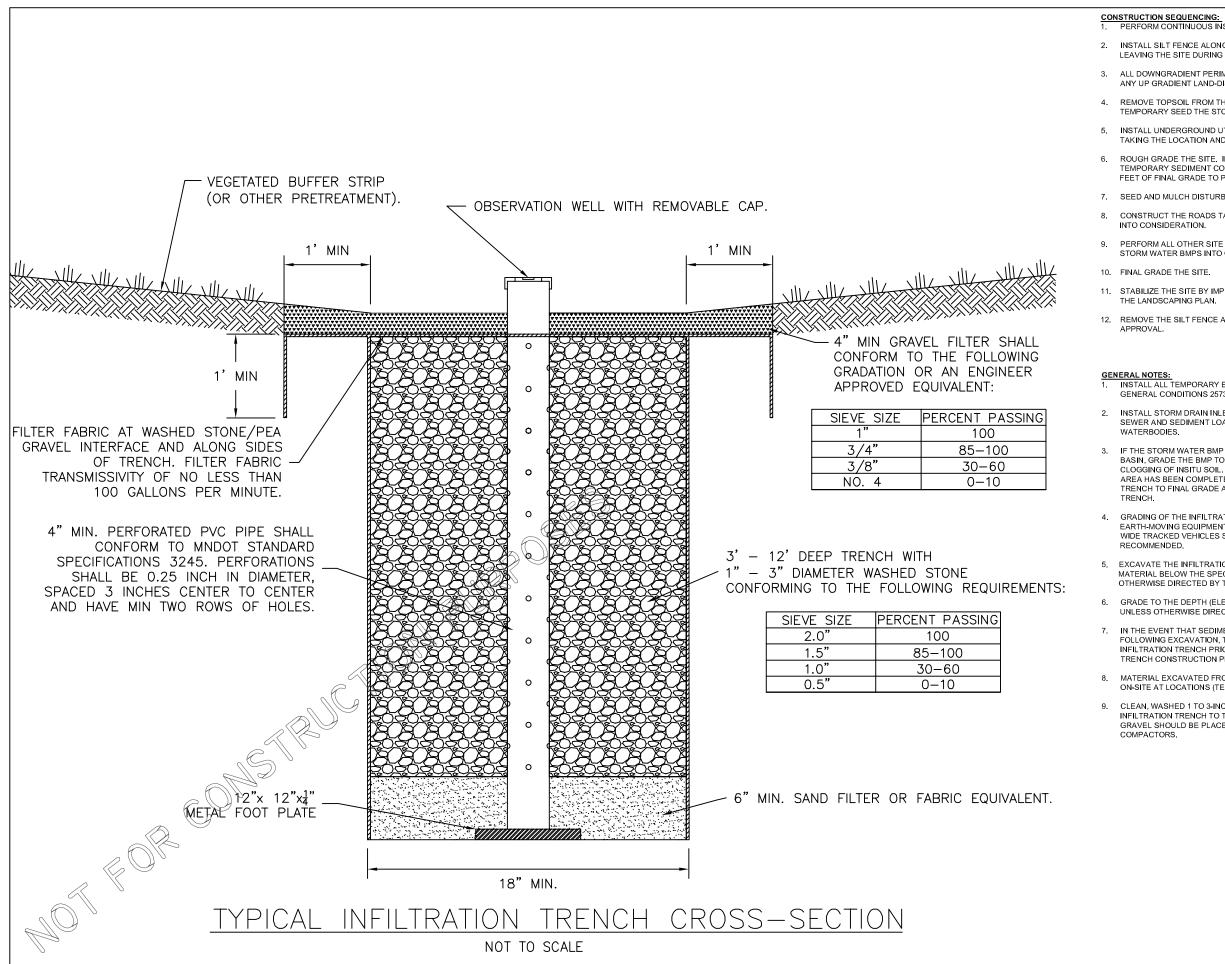




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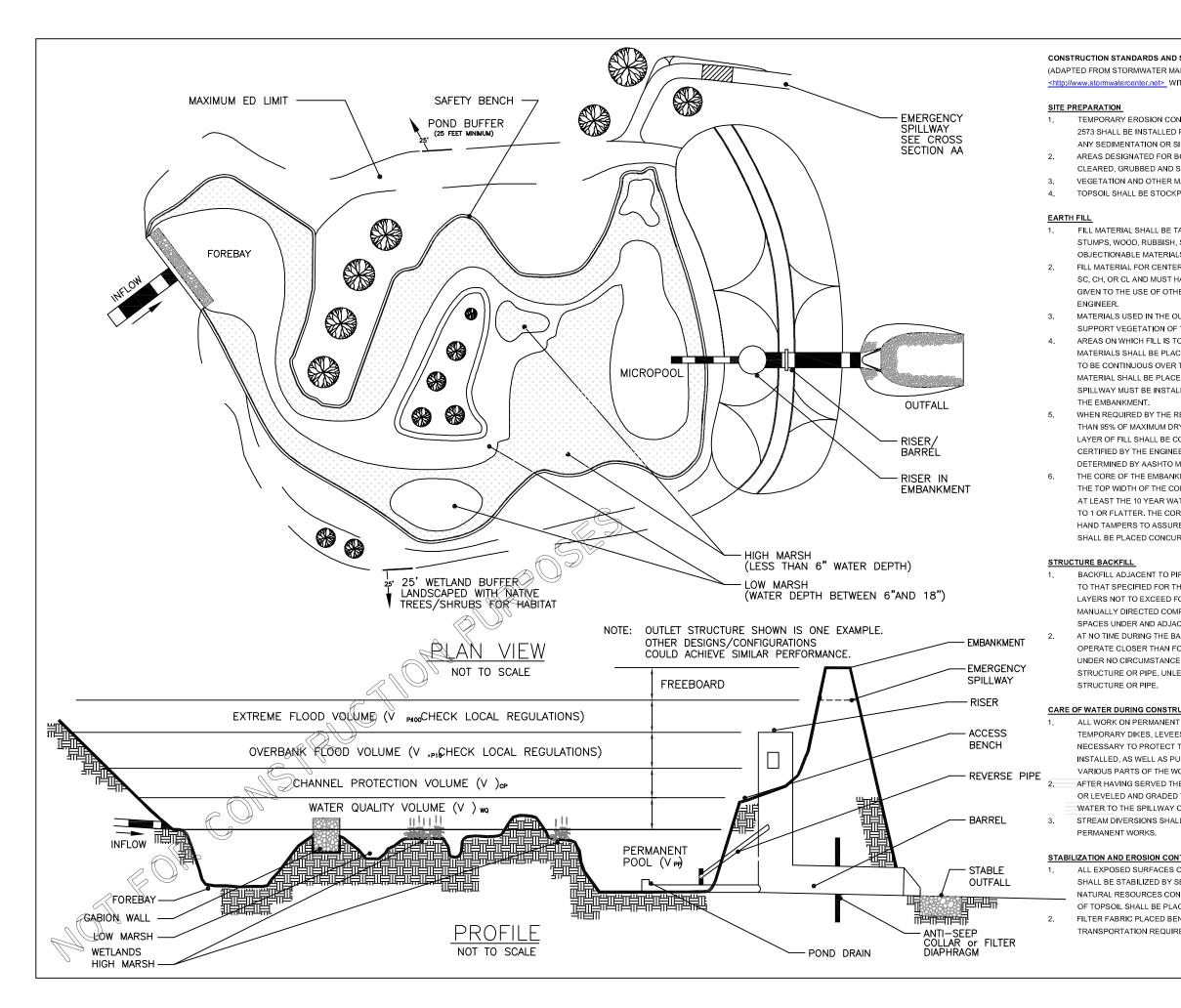


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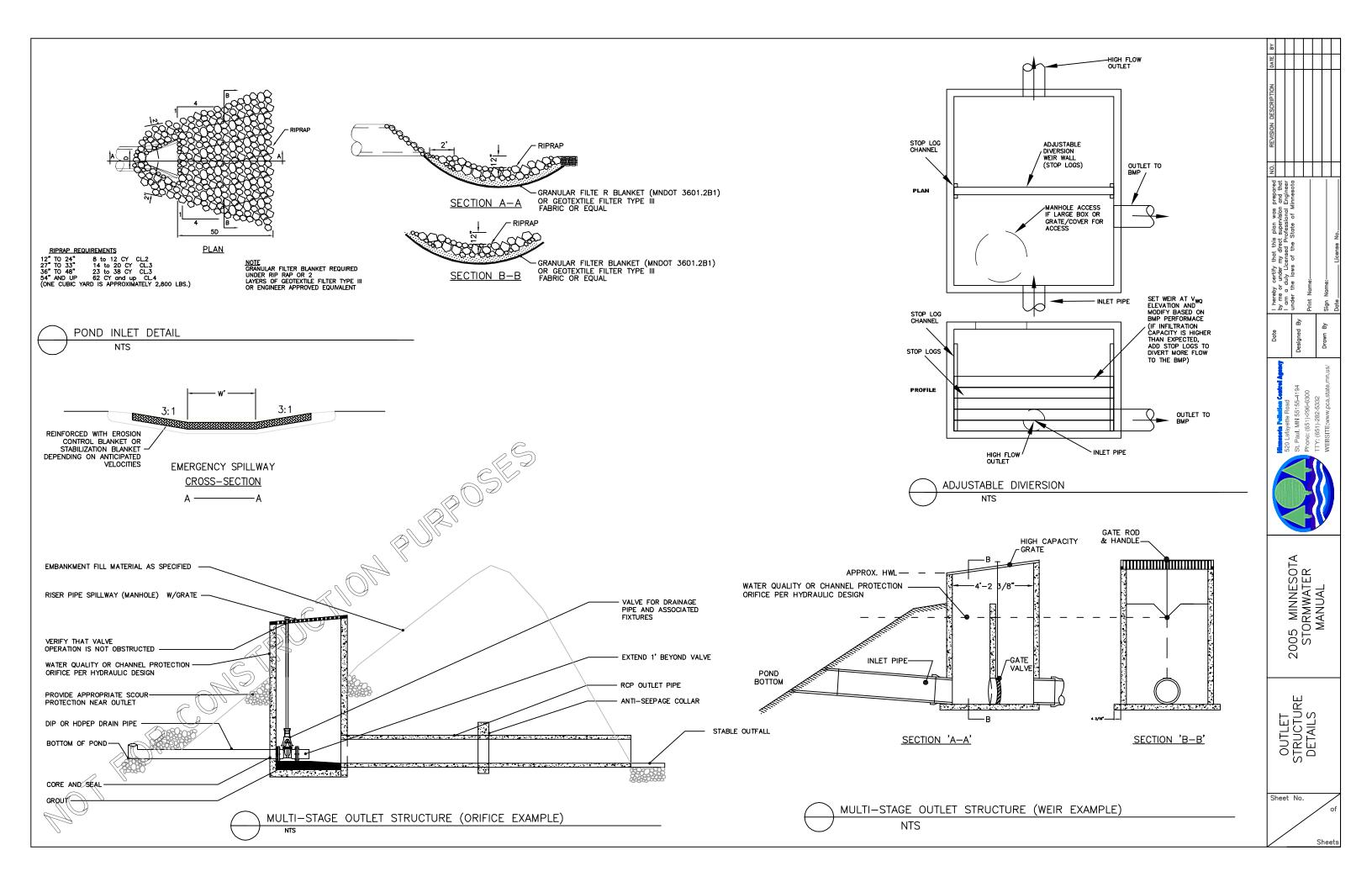
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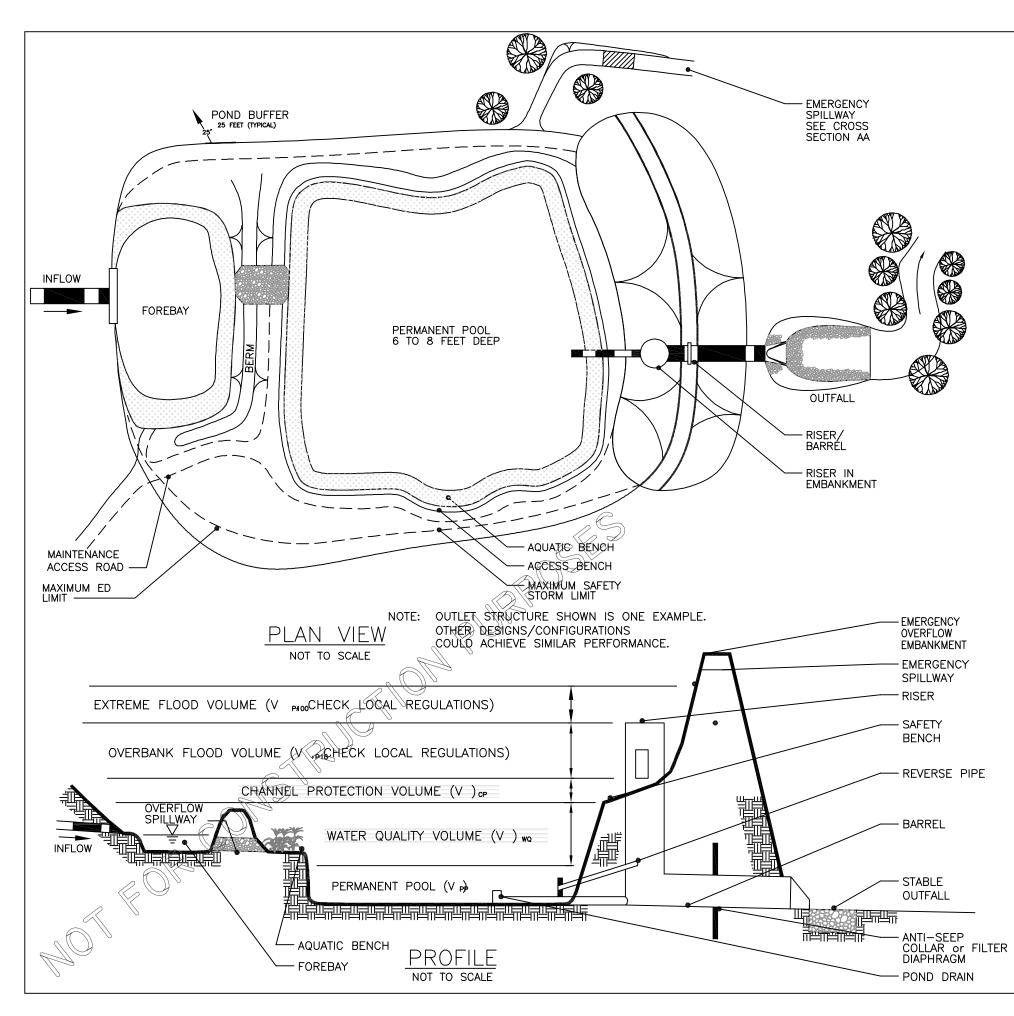
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REMENTS FOR A CLASS "C" FILTER FABRIC.		
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CONSTRUCTION STANDARDS AND SPE (ADAPTED FROM STORMWATER MANA <<u>http://www.stormwatercenter.net></u> WITH S

SITE PREPARATION

- 1. TEMPORARY EROSION CONTRO SHALL BE INSTALLED PRIOR TO SEDIMENTATION OR SILTATION /
- 2. AREAS DESIGNATED FOR BORR
- CLEARED, GRUBBED AND STRIP
- VEGETATION AND OTHER MATER
 TOPSOIL SHALL BE STOCKPILEE

EARTH FILL

- FILL MATERIAL SHALL BE TAKEN STUMPS, WOOD, RUBBISH, STON MATERIALS.
- 2. FILL MATERIAL FOR CENTER OF SC, CH, OR CL AND MUST HAVE TO THE USE OF OTHER MATERIA
- 3. MATERIALS USED IN THE OUTER VEGETATION OF THE QUALITY R
- 4. AREAS ON WHICH FILL IS TO BE F MATERIALS SHALL BE PLACED IN BE CONTINUOUS OVER THE ENTIF SHALL BE PLACED IN THE DOWNS MUST BE INSTALLED CONCURRE EMBANKMENT.
- 5. WHEN REQUIRED BY THE REVIEW THAN 95% OF MAXIMUM DRY DEM LAYER OF FILL SHALL BE COMPA CERTIFIED BY THE ENGINEER AT BY AASHTO METHOD T-99 (STAN
- 6. THE CORE OF THE EMBANKMENT TOP WIDTH OF THE CORE SHALL LEAST THE 10 YEAR WATER ELEN OR FLATTER. THE CORE SHALL B TAMPERS TO ASSURE MAXIMUM PLACED CONCURRENTLY WITH

STRUCTURE BACKFILL

- BACKFILL ADJACENT TO PIPES OF THAT SPECIFIED FOR THE ADJOIN NOT TO EXCEED FOUR INCHES I MANUALLY DIRECTED COMPACT SPACES UNDER AND ADJACENT
 AT NO TIME DURING THE BACKF
- CLOSER THAN FOUR FEET, MEA: CIRCUMSTANCES SHALL EQUIPM UNLESS THERE IS A COMPACTED

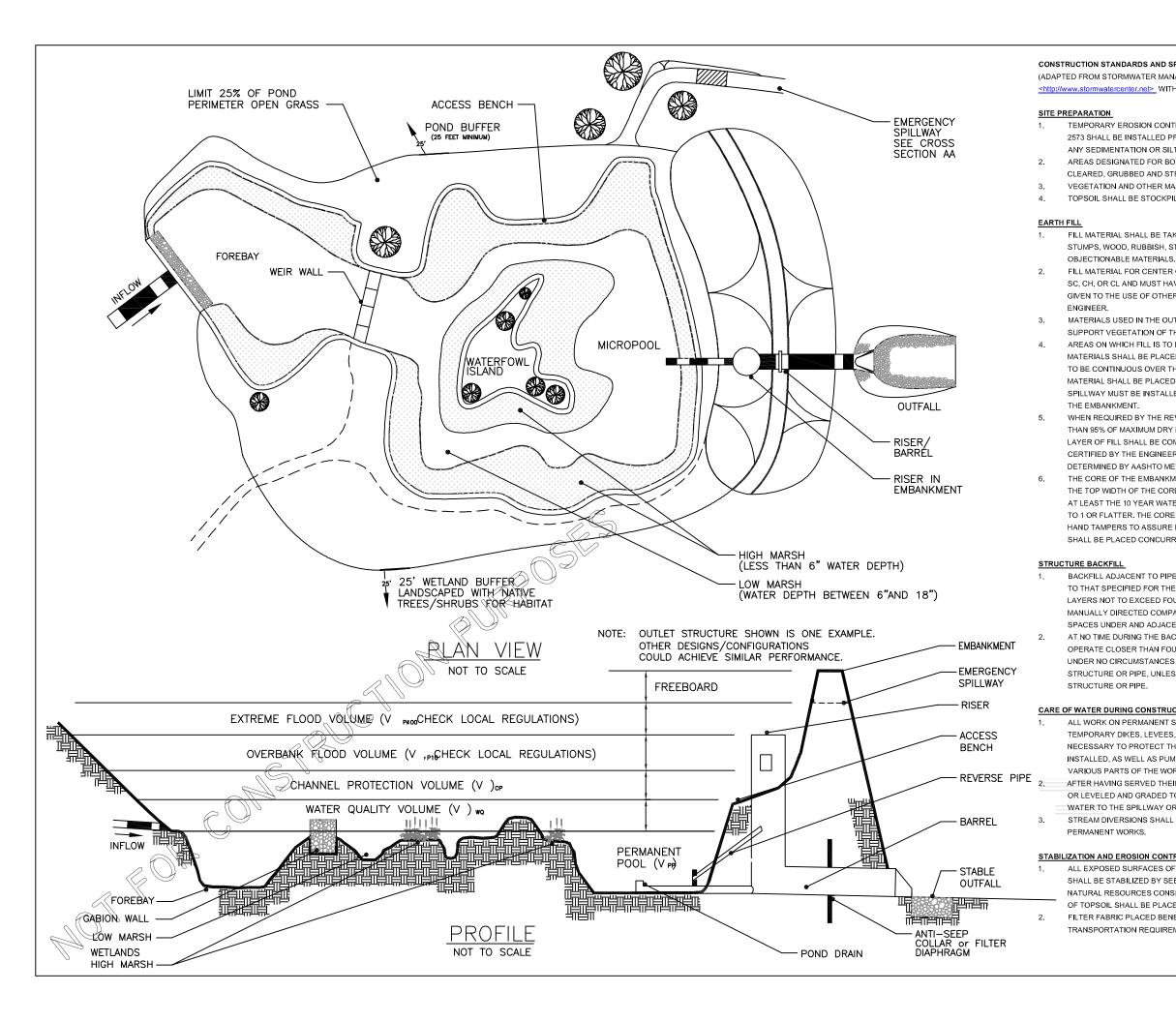
CARE OF WATER DURING CONSTRUCTION

- ALL WORK ON PERMANENT STRU TEMPORARY DIKES, LEVEES, CC NECESSARY TO PROTECT THE A INSTALLED, AS WELL AS PUMPIN VARIOUS PARTS OF THE WORK.
 AFTER HAVING SERVED THEIR P
- LEVELED AND GRADED TO THE EX TO THE SPILLWAY OR OUTLET WO
- 3. STREAM DIVERSIONS SHALL BE PERMANENT WORKS.

STABILIZATION AND EROSION CONTRO

 ALL EXPOSED SURFACES OF TH SHALL BE STABILIZED BY SEEDII NATURAL RESOURCES CONSER¹ TOPSOIL SHALL BE PLACED ON
 FILTER FABRIC PLACED BENEAT TRANSPORTATION REQUIREMENT

	BY				
	DATE				
ECIFICATIONS AGER'S RESOURCE CENTER, <u>WWW.STORMWATERCENTER.NET</u> SOME ADDITIONS)	DESCRIP TION				
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